Unequal Pay for Equal [CEO] Work? Gender Disparities in US Charity Compensation*

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Abstract

This paper studies the incidence and drivers of gender pay differences among top executive managers in the context of U.S. charities. Using charity-level data from 990 tax forms, we find that, conditional on receiving compensation, female managers receive between 8% and 21% less total compensation than male managers. By contrast, we also find female managers are more likely to receive compensation than male managers. When examining reasons for the documented gap, we find female managers are not rewarded for better performance. These findings rule out differences in performance as a direct cause of pay differences and suggest organizations' gender-based perception and managers' preferences may be driving the observed differences in pay.

Keywords: CEO compensation, gender pay gap, charities, non-profits, NGOs.
JEL Codes: J16, J30, J71, J81, L31.

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1 Introduction

Hiring the right CEO and determining their compensation are among the most important strategic decisions in an organization (Barnard, 1938; Frick, 2014; Bertrand and Schoar, 2003; Fee et al., 2013; Bennedsen et al., 2020). However, anecdotal and statistical evidence shows pervasive biases across organizations when it comes to appointing CEOs and determining their compensation. A salient example of these biases is the preference shown by firms and organizations to hire and promote men (over women). In fact, only 10% of Forbes 500 companies are run by women.[1]

A potential and well-documented driver of gender biases in the literature is gender discrimination. Gender discrimination is still ubiquitous in our society in the midst of the 21st century. It is everywhere, in consumer product markets (Moshary et al., 2023; Gneezy et al., 2012), in the labor market (Cook et al., 2020; Blau and Kahn, 2017), and in government (Droganova, 2018; Bolton and de Figueiredo, 2017). Moreover, it can manifest itself in a variety of ways (e.g. lower pay and lower promotion rates for equal work, lower likelihood of being hired, or paying higher prices for the same product), and thus, it is a major source of inefficiency.

In fact, gender biases are not innocuous to the well-functioning of organizations and markets. Gender gaps are responsible for the misallocation of resources and people within an organization (less qualified men may take jobs where more qualified women were available) and discourage optimal provision of effort by women in the labor force, as the same amount of effort and merit may mean lower pay and slower promotion ladders in their careers (relative to men). Lower wages and worse job prospects in the workplace may also deter on-the-job investments and female labor market participation altogether. It is therefore not surprising that governments around the world actively adopt policies to foster female labor participation, eliminate pay differences between men and women, and even increase the presence and role of female managers in the private and public sector.[2] While the impact of these gaps is important in any job, it is likely to have much greater and longer lasting effects in managerial positions with authority over other workers.

There may be several reasons why these differences could be observed. First, gender pay gaps may be driven by open discrimination, that is, an organization openly discriminates against female employees even if it believes that women perform at the same level or better than men. Second, although an organization may not be aware of its discriminatory behavior per se, it may adopt discriminatory practices pervasive in the labor market that foster gender differences in pay ("everyone does it, so we can/should do the same"). Third, differences in pay may be driven by differences in job preferences, skills, or other attributes. For a variety of reasons —some caused in part by gender discrimination elsewhere —women may not have had the same level of professional experience and career growth as their male counterparts. Fourth, and related to the previous point, organizations may want to boost their perceived legitimacy by hiring women managers but "settling" for a lower profile candidate.

We contribute to the existing literature on CEO compensation and gender pay gap by studying the

[1] See https://fortune.com/2024/06/04/fortune-500-companies-women-ceos-2024/ and https://www.morningstar.ca/ca/news/232320/more-canadian-ceos-named-michael-than-women-ceos-report.aspx.

[2] Belgium, France, Germany, Iceland, India, Israel, Italy, Norway, Pakistan and Spain currently have legislated quotas for women on corporate boards of publicly listed companies. See World Bank Group, *Women, Business and the Law 2016 - Getting to equal*, 2015. https://thedocs.worldbank.org/en/doc/810421519921949813-0050022015/original/WomenBusinessandtheLaw2016.pdf.

existence and drivers of gender differences in pay in the context of top managers in U.S. charities. While non-profits have received little attention from the economics literature, this sector is a compelling empirical setting when studying gender differences for three reasons. First, women are well-represented in the non-profit sector. In the U.S., 73% of all non-profit employees are women,[3] which is much higher than the share of women in the overall labor force, where females represent 47% of all U.S. workers.[4] Similarly, women in leadership positions in the non-profit sector are also more common at 44% (our data) compared to the 2% female CEOs for U.S. for-profit public firms (Gupta et al., 2018; Hill et al., 2015). Second, our empirical setting is unique in that managerial incentive tools available to non-profit organizations are limited due to the nature of the services and goods rendered. This feature is important because it attenuates the importance of arguments highlighting gender selection into competitive and risky contracts existing in the gender literature (Niederle and Vesterlund, 2007). Finally, it is important to note that the non-profit sector in the U.S. (and elsewhere) is sizeable and economically important (i.e., 5.6% in the U.S. or 8.5% in Canada). This suggests the potential magnitude of inefficiency caused by the gender gap is also economically important. In short, our paper provides evidence of gender differences in pay in an economically important setting which is largely unaffected by women's selection into the workplace, and where men's selection into powered-incentive contracts is less important.

While gender pay gaps are well documented for many occupations,[5] evidence of gender differences in pay among CEOs and executive management is inconclusive (Gupta et al., 2018; Hill et al., 2015). This appears to be driven by a combination of opposing forces on wages. On the one hand, the factors previously mentioned that can explain pay differences also push salaries of female CEOs down. On the other hand, the scarcity of female CEOs increases wages due to supply shortage of qualifying female managers. Thus, whether gender pay differences exist (and why) is an empirical question that depends on context.

Using novel data from tax filings of non-profits, we investigate compensation patterns for executive managers in U.S. charities. A unique feature of the non-profit senior management market is that not all managers are compensated for their work. In fact, we observe that 54% of managers do not receive any compensation which also allows us to explore whether there are gender differences in the likelihood of receiving compensation. Our findings show that, conditional on being paid, men receive between 8% and 21% higher compensation, and that this gap is only present in the largest organizations. Moreover, we find that men are less likely to receive compensation overall regardless of the organization size. Additionally, we find that the observed gaps are robust to the inclusion of manager characteristics such as age, education and experience obtained from LinkedIn data. Last but not least, we find heterogeneity in the gender pay gap across types of charities. If anything, we find that sectors with a private sector parallel (i.e., healthcare, education) display wider gaps than those without a private sector counterpart (i.e., human relief, rights advocacy).

Once we establish empirically the incidence and heterogeneity of these various forms of gender pay differences in executive management of U.S. charities, we investigate how these differences in the cross-section of organizations and managers are related to performance. Using fixed effects approaches

[3]The White House Project Report, 2009

[4]BLS various reports, Women in the labor force: a databook, September 2009.

[5]The economic literature has found gender differences in pay for a wide range of occupations, including teaching (Ransom and Lambson, 2011; Biasi and Sarsons, 2022, 2021), Uber driving (Cook et al., 2020), law (Azmat and Ferrer, 2017) and for MBA graduates working in the U.S. financial and corporate sector (Bertrand et al., 2010). The size of the wage gap varies across industries from 8 to 18% on average (Blau and Kahn, 2017).

detailed in Abowd et al. (1999), Bertrand and Schoar (2003) and Janke et al. (2019), we show that, while (i) the distribution of managerial compensation differs across genders, (ii) the impact of managers on performance does not differ substantially across genders. We interpret this mismatch between the distributions of performance and compensation as the market for non-profit managers (wrongfully) perceiving women managers as less differentiated than men. When matching compensation and performance fixed effects per manager, we are able to show that top-performing men receive higher compensation, but top-performing women do not. Because we control for charity fixed effects, our findings suggest this mismatch between manager pay and performance is driven by gender-based perception differences (i.e., gender discrimination and stereotypes) and manager preferences (Bertrand, 2020).

Finally, it is worth noting that our paper also contributes to a large literature studying purpose-driven organizations. Gartenberg (2022) divides this literature into three. First, part of the literature debates what the purpose of an organization should be (Friedman, 1970) and how to measure purpose. A second part of the literature studies how organizations trade profits for purpose goals (Gartenberg et al., 2019). A final and third part of this literature studies how purpose and differences therein shape behavior of firms and organizations (Gartenberg and Serafeim, 2023; Gartenberg and Yiu, 2023; Gartenberg, 2022). Our paper contributes to this third subset of the literature by investigating whether and why there is a gender gap in top management compensation in purpose-driven organizations.

The remainder of this paper proceeds as follows. The next section briefly reviews the gender gap literature in economics. Section 3 provides details regarding the non-profit sector, and presents a framework to guide our empirical analysis. Section 4 describes our different sources of data. Section 5 details methodology and results establishing incidence and heterogeneity of the gender pay gap in senior management of U.S. charities. Section 6 investigates the role of performance differences in the observed gender pay gap in the data. Finally, Section 7 concludes.

2 Literature Review

Our research mainly contributes to three streams of literature. Most generally, our paper contributes to the literature on gender gaps in labor markets.[6] In this section, we namely refer to most recent contributions and literature surveys. Gender wage gaps are well documented across occupations, industries and countries (Blau and Kahn, 2003, 2017). Blau and Kahn (2017) document a decline in the gap between 1980-2010 and find, through a survey of the literature, that gender differences in occupation remain a big determinant in addition to differences in income levels, work force interruption, hours, discrimination, non-cognitive skills and gender roles. Similarly, Weichselbaumer and Winter-Ebmer (2005) find that raw differentials have decreased over time because of improving female labor market endowment. The literature has also explored other mechanisms driving gender differences such as competition (Flory et al., 2015; Niederle and Vesterlund, 2007; Gneezy et al., 2009), confidence (Sarsons and Xu, 2021), performance (Azmat and Ferrer, 2017; Joshi et al., 2015) or negotiation savviness (Leibbrandt and List, 2015), flexibility related to work or pay (Goldin and Katz, 2016, 2011; Cook et al., 2020; Biasi and Sarsons, 2022), career dynamics (Bertrand et al., 2010), compensation schemes (Ransom and Lambson, 2011), as well as discrimination (Bertrand and Hallock, 2001). In her recent book, Goldin (2021) explores how many of these factors explain the wage gap and how they have changed over time to shape

[6] Because this is a large literature, we are unable to cite all contributors here.

the careers of multiple cohorts of white college educated women. She highlights that greedy jobs, ones where long hours and hours worked on weekends are rewarded with higher pay, are a driver of today's gender gap for her sample of focus.

To understand why gender gaps exist, the literature has used a variety of approaches applied to different settings. For example, Niederle and Vesterlund (2007) use an experimental setting to find that gender differences in performance due to differences in preferences for competition (tournament over a noncompetitive piece rate payment) are mainly explained by male overconfidence. Bertrand et al. (2010) use career data of MBAs from a U.S. business school and show that, despite similar earnings at the start of their career, there is a divergence over time explained by gender differences in training before the MBA, career interruptions and hours worked per week. Azmat and Ferrer (2017) show gender performance differences among U.S. lawyers are explained by the presence of young children and the aspiration to become partner, while discrimination does not appear to explain performance differences at the firm level. Ransom and Lambson (2011) find gender pay differences among Missouri school teachers, even with pay determined by a salary schedule, to be mainly driven by job mobility and sorting. Relatedly, Biasi and Sarsons (2022) use a reform allowing school districts to set teachers pay more flexibly and negotiate with teachers individually to show that flexible pay lowered female salaries relative to similar men due to differences in pay negotiations. Goldin and Katz (2016) find insignificant earnings gap and no part-time earnings penalty among pharmacists, relative to other college graduates. Finally, Cook et al. (2020) find a 7% pay gap among uber drivers in the U.S. caused by differences in learning-by-doing, location constraints, and speed preferences.

Recent studies have also argued that endogeneity of preferences resulting from stereotypes or gender identity norms explain part of the gender wage gap (Bertrand, 2020). For example, Bertrand et al. (2015) find a sharp decrease in the distribution of the share of wifes' income after it equals the husband's income, consistent with gender identity norms. Leslie et al. (2017) show how the adoption of diversity policies in organizations creates pay premium for high-potential women. Most recently, Ashraf et al. (2024) show positive selection into the labor force driven by gender norms across countries as a major determinant of observed pay gaps in a multinational company.

Having described above briefly the gender pay gap literature, this paper mainly contributes to the literature on CEO and senior management compensation. To do so, we apply the methodology in Abowd et al. (1999) to the setting of senior management in U.S. charities. We are able to disentangle differences in the contribution of managers and charities to the pay distribution observed in the data. A seminal paper to this literature is Bertrand and Schoar (2003). They use a manager-firm panel and a fixed effects approach to find that managers fixed effects explain heterogeneity in practices (investment, financial and organizational), and that managers with higher fixed effects are in better firms and are better compensated. More recently, Janke et al. (2019) investigate the impact of top managers on performance (hospital production measures) of English public hospitals and find the market perceives CEOs to be differentiated but little evidence that CEOs have an impact on performance.

While results on positive matching and performance have populated this literature (Baker and Hall, 2004; Terviö, 2008; Gabaix and Landier, 2008), other papers have documented the existence of gender gaps in executive and senior management. Bertrand and Hallock (2001) document only 2.5% of executives are female and a pay gap of 45% explained by firm size, age, and discrimination. In contrast, Hill et al. (2015) find that female and ethnically diverse executives receive higher compensation than white

males. Gupta et al. (2018) replicate and revisit Hill et al. (2015) with a larger sample and longer time period to find no evidence of gender differences in CEO compensation. Similarly, Bugeja et al. (2011) find no association between CEO pay and gender. Geiler and Rennboog (2015) also find mixed evidence among CEOs and executive directors managing listed UK firms. Flabbi et al. (2019) show that female leadership positively (negatively) impacts the top (bottom) of the female wage distribution in firms with more female workers. Lam et al. (2013) find evidence of a gender pay gap and limited evidence for CEO gender-firm performance gap using data from Chinese listed firms. Finally, Lee and James (2007) find more negative shareholders' reactions to announcements of female CEOs, with more moderate effects for internally promoted women.

Last, this research also contributes to a recent and growing literature studying non-profits and purpose-driven organizations. While a large part of the non-profit literature has focused on charitable giving (Bertrand et al., 2020; DellaVigna et al., 2012; Andreoni et al., 2014; Payne, 1998), recent studies have also investigated market structure and competition (Lapointe et al., 2018; Gayle et al., 2017; Harrison and Seim, 2019). Gartenberg (2022) argues the study of purpose-driven organizations is mainly divided into three types of study. On the one hand, some studies debate about what should be the purpose of an organization (Friedman, 1970) and how to measure purpose. On the other hand, other research investigate how organizations trade profits for purpose goals (Gartenberg et al., 2019). Finally, a third part of this literature studies how purpose and differences therein shape behavior of firms and organizations (Gartenberg and Serafeim, 2023; Gartenberg and Yiu, 2023; Gartenberg, 2022; Aksoy et al., 2025). Our paper contributes to this third part of the literature by investigating whether and why there is a gender gap in top management compensation in purpose-driven organizations.

In sum, this paper contributes to the existing literature by investigating whether the gender pay gap is present in the non-profit market, a sector that has been mostly omitted from the literature. Most importantly, this is a relatively large sector in the economy where women are well-represented (73% in labor force and 44% in leadership positions), pay is restricted to limited incentive-powered contracts (there is no company stock), value creation is hard to measure, and purpose eclipses the importance of profit. The next section describes the features of the non-profit sector that are important to our research here.

3 Non-profit sector

3.1 Institutional setting

While charities are non-profits, not all non-profits are considered charities and not all charities are the same according to U.S. government regulation. In our context, a charity is an organization that is registered as a 501(c)(3) public charity, and therefore must file a Form 990 with the U.S. Internal Revenue Service (IRS hereafter). Such an organization is tax-exempt, eligible to receive tax-deductible contributions, its earnings do not benefit private individuals, its activities cannot influence legislation, and it does not participate in political campaigns or endorsements. Note that such definition already makes our subject organizations very different from the non-profits and foundations studied previously in the literature (Bertrand et al., 2020).

Each organization is mainly characterized and differentiated from others through its distinct mission. A mission is essentially a written statement describing the purpose of the organization. This description

covers why the organization exists, whom it serves, and how it goes about achieving its goals.[7] Organizations carry out their mission through programs. A program is an activity that accomplishes an organization's exempt purpose.[8] For example the Boys & Girls Clubs of Boston's mission statement is:[9]

> *To help young people, especially those who need us most, build strong character and realize their full potential as responsible citizens and leaders. We do this by providing: a safe haven filled with hope and opportunity, ongoing relationships with caring adults, and life-enhancing programs.*

In contrast, a program details the activities through which the organization intends to achieve the goals of its mission. The Boys & Girls Clubs of Boston has three main programs:

- Program #1: Life skills – Boys & Girls Clubs of Boston help members develop health self-esteem, resilience, motivation and the ability to make good choices. Our full-time, licensed, club-based social workers perform targeted prevention and intervention work in the areas of violence prevention, gang prevention, substance abuse prevention, conflict resolution, [...]
- Program #2: Shared space and dedicated site clubs – Boys & Girls Clubs of Boston operates several shared clubs located in the Boston public schools or housing complexes. In addition to the shared space clubs, Boys & Girls Clubs of Boston also operates two dedicate [...]
- Program #3: Sports, fitness & recreation – Boys & Girls Clubs of Boston helps members develop healthy habits, skills for stress management, and social skills through participation in daily activities in our gyms, swimming pools, social recreation areas and [...]

This means that even in the rare case when two charities appear to have very similar missions, their channels to achieve their goals may be different enough such that they will be perceived as different by donors and stakeholders.

So far as differentiation is concerned, the IRS uses its own system to classify non-profit organizations, called the National Taxonomy of Exempt Entities (NTEE hereafter). It classifies charities and non-profits in major groups ("industry" or subsector) labeled from A to Z, with specific activity areas within subsectors categorized by decile numeric codes and specific types of organizations coded by numeric centile codes.[10,11] Appendix A provides the list of major groups and examples of common codes and organizations therein.

To conclude this section, it is worth discussing briefly CEO compensation practices in U.S. non-profits and charities. While the highest-paid non-profit CEOs are in healthcare and financial services, the bulk of highest-paid CEOs in non-profits tend to work at arts organizations, museums, and research institutes. Evidence from 2019 shows that the top 50 highest paid CEOs in charities earned between

[7] See "10 Killer Nonprofit Mission Statements to Check Out." Classy, August 27, 2021. https://www.classy.org/blog/10-killer-nonprofit-mission-statements-to-learn-from/

[8] See https://www.irs.gov/pub/irs-pdf/i990.pdf

[9] Mission statement and program description from our data detailed in Section 4 for the fiscal year 2017

[10] Deondre' Jones. "National Taxonomy of Exempt Entities (NTEE) Codes". National Center of Charitable Statistics, Urban Institute, April 2, 2019. https://nccs.urban.org/project/national-taxonomy-exempt-entities-ntee-codes#overview (accessed Sept. 8, 2021).

[11] Deondre' Jones. "IRS Activity Codes". National Taxonomy of Exempt Entities (NTEE) Codes, Urban Institute, January 22, 2019. https://nccs.urban.org/publication/irs-activity-codes (accessed Sept. 8, 2021).

1 and 6 million dollars in total compensation with up to 200% bonuses, taking home 8% of charity revenues and 58% of all wages paid.[12] Charities are free to pay their CEO whatever amount they feel is fair, even though the IRS provides guidelines for charities and their board to set pay for their senior management following reasonable rules.[13] Most importantly, the IRS recommendations show that there is a market for managerial talent in charities and that compensation should aim to retain talent whenever possible using both base pay and incentives. In comparison to their counterparts in for-profit firms, CEOs of charities receive lower salaries and bonuses, but that does not mean they are not taking any perks home. While incentive compensation cannot provide items such as stock buyout, stock options and profit rates, there exist many others incentives in their compensation package such as health insurance, retirement contributions, or professional expenses.[14]

3.2 Framework

Before describing our data sources and empirical strategy, we provide a framework to think about why gender paygaps may exist in charities as well as how to empirically disentangle some of these drivers in our data. For this purpose, let us exogenously match a charity j and a manager i without worrying why that match takes place. Charity j wants to employ manager i, and manager i wants to work for charity j. Let us assume they Nash-bargain over the manager's salary. The net utility of the charity is such that,

$$U_{ij} = y_{ij} - w_{ij} + \alpha_{ij} \tag{1}$$

where y_{ij} is the productivity of the match, w_{ij} is the salary paid to manager i, and α_{ij} is the charity's diversity preference parameter specific to manager i. The net utility of the manager is such that,

$$V_{ij} = w_{ij} - c_{ij} + \theta_{ij} \tag{2}$$

where w_{ij} is the salary paid to manager i (same as above), c_{ij} is the manager's opportunity and performance cost, and θ_{ij} is the manager's preference parameter (taste) for the job at charity j. Let us also assume a bargaining power parameter σ_{ij}. Efficient Nash-bargaining will result from maximizing,

$$(y_{ij} - w_{ij} + \alpha_{ij})^{1-\sigma_{ij}} \times (w_{ij} - c_{ij} + \theta_{ij})^{\sigma_{ij}} \tag{3}$$

such that

$$w_{ij} = \sigma_{ij} \times (y_{ij} + \alpha_{ij} + c_{ij} - \theta_{ij}) \tag{4}$$

Not surprisingly, the manager's compensation w_{ij} depends on their bargaining power, their productivity, their opportunity cost, and the charity's and manager's preferences. Reached this point, we can apply logs and linearize to rewrite the expression above as a regression equation such that,

$$ln(w_{ij}) = ln\sigma_{ij} + lny_{ij} + ln\alpha_{ij} + lnc_{ij} - ln\theta_{ij} + \epsilon \tag{5}$$

[12] See `https://www.causeiq.com/insights/highest-paid-nonprofit-ceos/` and `https://www.charitywatch.org/top-charity-salaries`

[13] See `https://www.councilofnonprofits.org/tools-resources/executive-compensation`.

[14] See `https://work.chron.com/salary-difference-between-corporate-nonprofit-industries-24453.html`

Let us then create a dummy, $D_j = 1$, if manager j is female, and rewrite the regression equation above as,

$$ln(w_{ij}) = \beta_0 + \beta_1(ln\sigma_i + ln\alpha_i)D_j + \beta_2 lny_{ij} + \beta_3(ln\theta_{ij} + lnc_{ij}) + \epsilon \quad (6)$$

The main take away of Equation (6) is that, holding constant match productivity and the managers' specific costs and preferences, differences in pay will be mainly driven by charities' gender-based differences in bargaining and preferences. Thus, the goal of our analysis below is to estimate specifications where we aim to estimate the gender pay gap in U.S. charities while accounting for differences in performance, costs and preferences.

In the next section, we describe our data. Because our compensation information comes from 990 forms as recorded by `charitynavigator.org`, we only observe the total compensation of each top senior manager, that is, base salary plus performance pay (if any).

4 Data

We obtain our primary data set from `charitynavigator.org` containing information from the universe of all organizations registered as 501(c)(3) entities and submitting 990 Forms to the IRS. To maintain a tax-exempt status, an organizations must file a 990 tax Form to the IRS. Our data consist of such filings for more than 220,000 organizations between 2010 and 2019. The data set includes organization-year level variables such as revenue, expenses, number of programs, assets, number of workers (salaried and volunteered), and revenue and expenses per type of activity (i.e., grants, programs, fundraising, and membership dues). The forms also detail the name and title (most often CEO or president but also others such as director or executive chairman) of the highest officer in the organization, as well as their compensation. We supplement the `charitynavigator.org` data with 990 tax forms from `Guidestar.org` which provide information on charity classification and allows us to verify the information from our primary data source.

Given that the gender of the managers is not reported in the tax filings, we must match names to gender. To do so, we use 102,240 authenticated gender tagged names from `GenderChecker.com`.[15] This data set classifies names as Female, Male or Unisex. We match first names from top officers to the authenticated gender tagged names classified as Female or Male, and manually look up the remaining unmatched or unisex first names to assign them as Female or Male.

We acquire our last dataset from Datahut, a firm specialized in web scraping services. We obtained access to the universe of LinkedIn profiles active as of 2017. Datahut collected the publicly available information from over 300 million profiles, including approximately 110 million for individuals based in the United States. We use the public information available in LinkedIn profiles of these data to create proxy variables for age, education and experience, not observable otherwise, because they influence compensation. These variables and their construction are detailed in Section 4.1.

The primary data set contains 1,660,674 charity-year observations from 2010 until 2019. We drop observations from 2010 and 2019 because not all tax filings were available for the fiscal year at the time of data collection by `charitynavigator.org`. We also drop observations with duplicate

[15] We also use frequencies of names by gender from the Social Security Administration from 1880 to 2019 to assign gender to some names not included in `GenderChecker.com`.

filings,[16] entries with missing information, organizations that do not report a manager, those not listed as 501(c)(3) public charities, or those located in U.S. territories.[17] This leaves us with an unbalanced panel of 1,000,059 organization-year observations containing information for 209,474 unique organizations and 336,149 unique managers. We can match 99.86% of managers to a gender of male or female leaving us with a final sample of 998,993 observations with 335,689 unique managers and 209,311 unique charities. Table 1 shows that 44.04% of managers in our final sample are female.

When focusing on compensation, 54.41% of managers in our sample do not receive compensation. As shown in Table 2, males are more frequently unpaid than females with 58.49% of males not receiving compensation relative to "only" 48.53% of females not receiving compensation for their work at the charities in our data.

Accounting for unpaid managers, the average compensation in our data reported in Table 3 is $71,686.68. When we separate compensation by gender, we see a clear gap. While the average female compensation is $58,593.83, the average male compensation is $80,758.17. When only using those managers that receive compensation, the average compensation for all jumps to $157,252.26. Among managers receiving a positive compensation, the average female remuneration is $113,842.85 and the average male remuneration is $194,543.21. It is important to note as well that there is more variation in compensation for males compared to females as seen by the larger standard deviation. This is the case whether we include or not the managers without compensation.

It is also interesting to examine how the percentage of women managers and the difference in pay changes with the size of the non-profit. Figure 1a plots the percentage of women in senior management position per non-profit revenue percentile in our sample. The percentage ranges between 35% and 45% for the whole distribution except for the very top 5% of non-profits where the percentage of women in top senior positions drops to 23%. Figure 1b plots the difference in pay per revenue percentile including the managers that receive no compensation. We can see that there is almost no difference until the 80th percentile, and a positive and increasing difference between the 80th and 100th percentile. Finally, Figure 1c repeats the exercise with only those managers receiving compensation. In this last graph, we clearly see the gender difference in pay is pervasive across the whole distribution of non-profit revenue size. The evidence in Figure 1 is using raw data only. In our regression analysis below, we will control for non-profit characteristics to address the potential role of confounders driving the observed gender pay differences.

There are 191,378 management turnover episodes within organizations in our data. Among all organizations, 51.24% have at least one change of manager during the sample period. Panel A of Table 4 shows that most of these manager transitions are from unpaid to unpaid manager (56.4%) and between both managers receiving compensation (22.6%), but there is still a 20.9% of transitions from paid to unpaid or vice versa. We can also dissect transitions by gender: 1) Male to Male, 2) Male to Female, 3) Female to Male and 4) Female to Female. Panel B of Table 4 shows that 35.5% of turnovers imply a change in the manager gender. Therefore, we are able to exploit within charity variation in manager gender to investigate how compensation changes within organizations.

[16] Organizations must file name or address changes, and also sometimes amend their forms. This creates duplicate entries in our data set. We keep the entries corresponding to the last filing for a given fiscal year. When it is impossible to distinguish which entry was last submitted to the IRS, we select the entry with a manager or with the highest revenue or expenses reported.

[17] Organizations located in American Samoa, Guam, Northern Mariana Islands, Puerto Rico, Virgin Islands, Armed Force Pacific or Armed Force Europe are removed from the sample.

Using the information from the data set, we can construct various manager-level variables. These variables are reported in Table 5. It shows the average manager is associated with 1.17 organizations, only 3% of them appear in more than one organization in a given year, 6% of managers appear in multiple organizations over time, and the average tenure at an organization is 2.5 years within our sample from 2011 to 2018.

There is wide heterogeneity in job titles in our sample. President and CEO represent the vast majority of our sample (55.7% and 35.5%, respectively), while other job title such as chief officer, VPs, directors and others represent only 8.8%. Figure 2 orders our job title classification from lowest average paid job title (director) to highest paid job title (vice president).[18] Clearly paid females receive lower compensation than paid males on average across all job title classifications. Figure 3 shows percentages of females and percentages of paid managers per title. Chief officers and CEOs are the job titles with the highest percentage of paid managers and over 40% female representation. They are followed by job titles of VP and director with lower percentages of paid managers and equal female representation. President and our classification of "Other" job titles present the lowest percentages of paid managers.

Table 6 reports charity level summary statistics of the variables we use in our empirical analysis below (note all dollar amounts are in $100,000 units). Organizations in our sample report on average total revenues of $8.5 million and total expenses of $8 million. The data breaks total revenue into primary sources of revenue such as contributions, government grants, membership dues, and program service revenues. The average organization in our sample receives $2.2 million in contributions, $1.6 million in government grants, $23,700 in membership dues, and $5.8 million in program revenues. On the expense side, the average organization in our data has $6.9 million in program expenses, $968,900 in administration expenses, and $118,300 in fundraising expenses. The average organization has $15.7 million in total assets and $5.9 million in liabilities, adding up to $9.8 million in net assets. Needless to say, the size distribution of the organizations in our sample is heavily skewed. For example, while the mean total revenue in the sample is $8.4 million, the median amount of revenue is $0.5 million, and the maximum amount of revenue is $54 billion.[19]

4.1 LinkedIn Sample

As mentioned, we obtain public information from the universe of LinkedIn profiles as of 2017 from Datahut. Out of a total of 300 million profiles around the world in the data, 110 million profiles come from U.S. LinkedIn profiles. Using information from these profiles, we construct variables to proxy for manager characteristics that are not observed in the non-profit tax filings such as education, experience, age, volunteering experience, and retirement status.

Unfortunately, we cannot match all managers in our working sample to a LinkedIn profile. This may happen for different reasons. First, not everybody has a LinkedIn profile as some people may use other platforms and others just do not use this type of networking services. Second, matching by traditional

[18] The "Other" category corresponds to titles not picked up by other classifications such as secretary, administrator, treasurer, superintendent, club manager, clerk, headmaster, board member, trustee, or campaign manager.

[19] To provide some context, Kaiser Foundation Health Plan Inc. was responsible for the highest revenue, program service revenue and program expenses in our data, Batelle Memorial Institute for highest dollar value of contributions and government grants, the Institute of Nuclear Power Operations for membership dues, the American Lebanese Syrian Associated and St. Jude's Children Research Hospital for fundraising expenses, President and Fellows of Harvard College for net assets, total liabilities and total assets, the Teachers Pets Child Care Center Inc. for number of employees, and the National Family Partnership Inc. for number of volunteers.

methods is complex. We start to match profiles by name and location (city and state). Then, we match by manager name and charity name. Finally, we use the fact that the data from Datahut contains the url of each profile in 2017 and that those seldom change over time. We hired a team of RAs and a professional data company to look up the LinkedIn profiles of all managers in the top 40% organizations (by revenue size), and record the urls of those managers with a LinkedIn profile. We then merge our data with the urls recorded. In the end, we are able to match LinkedIn profiles for 54,267 managers associated with 75,159 organizations, corresponding to 239,596 organization-year observations.[20]

We extract information from the different sections of the profiles to create variables that are used to control for manager characteristics. From the headline, the short description of the individual, we extract whether someone is retired or currently a student. We use the information from the education section to create various education indicators. This information typically consists of the degree, school and dates of various education spells. Our education variables capture the highest degree listed. Similarly, from the experience section we extract each employment spell along with the organization and dates of employment. We measure experience with the number of jobs an individual has held. Using information on volunteer experience, we create an indicator for whether someone reports having some volunteering experience. We use the dates under the different sections to create a proxy for age. We find the earliest date across education, experience and volunteer experience and use this to create the date of birth by adding 21. We use dates from all sections because profiles are not consistently filled out.[21] Using the name of the organizations listed in the experience and volunteering section, we can create measures of other experience (i.e. how many other organizations did a manager work or volunteer at). See these variables in Table 7.

Table 7 shows the average manager in our LinkedIn sample is 54 years old, 37.5% of them obtained a college degree, 18.9% have a graduate degree, and 2.5% of profiles claimed to be students to some capacity in 2017. In our data, 19% volunteer at an average of 0.6 organizations that is not the one listed in our primary data, 3.1% are retired, and those listing jobs have had 2.65 jobs with 2.40 of them at different organizations than the charity they manage in the `charitynavigator.org` data set. We use these data to complement our analysis with our main data.

5 Is there a gender pay gap in U.S. charities?

5.1 Empirical Strategy

This section presents our methodology to document the incidence of gender pay gaps in the non-profit sector for senior managers. Our empirical strategy consists of estimating OLS regressions for two dependent variables: (i) manager compensation (measured in log), and (ii) whether a manager receives compensation. The first specification is the following,

$$ln(comp_{ijt}) = \alpha + \beta Female_i + \gamma X_{ijt} + \delta_j + \theta_t + u_{ijt} \tag{7}$$

[20]The gender composition of the managers matched to a LinkedIn profile is similar to the full sample with 46.94% of manager being females and 48.60% of the LinkedIn sample receiving some compensation. Similar to the full sample, the share of women receiving compensation is thirteen percentage points larger than men. The average compensation over all managers (paid and unpaid) is lower at $62,312.60 and the average compensation conditional on receiving a positive pay is also lower at $128,213.74. The compensation gap is present as well as the larger variation for males.

[21]Results are robust to different proxies of age constructed from dates from only one section.

where the dependent variable is the natural log of compensation of manager i working in charity j in year t. The independent variables in our regression specification are a dummy variable, $Female_i$, that takes value 1 if manager i working at charity j in year t is female, 0 if male, and X_{ijt}, a number of controls specifying characteristics of manager i or charity j in year t such as tenure at the job, and revenue and expense profiles of the charity j. Some specifications also include year and state fixed effects, controls for the title of the manager, and organization level fixed effects such as NTEE (charity classification) fixed effects or charity fixed effects. LinkedIn controls are also added in some specifications using the corresponding matched subsample of data. The last component, u_{ijt}, is the error term.

The following equation is our second specification,

$$I(Paid = 1)_{ijt} = \alpha + \beta Female_i + \gamma X_{ijt} + \delta_j + \theta_t + u_{ijt} \tag{8}$$

where the dependent variable is a dummy variable that takes the value 1 when manager i receives compensation from working at charity j in year t. The independent variables in our regression specification are again a dummy variable $Female_i$ that takes a value of 1 if manager i is female, 0 if male, and X_{ijt}, the controls specifying characteristics of manager i or charity j in year t such as tenure at the job, and revenue and expense profiles of the charity j. These specifications include the same set of fixed effects and LinkedIn controls as in Equation (7). The error term is also denoted as u_{ijt}.

While these specifications contain time-varying controls and fixed effects at the charity-level, it is important to note, per our discussion of Equation (6), that these regression specifications are not holding constant manager or firm-level determinants of gender paygaps. The goal of this section is to simply document the existence of gender paygaps in U.S. charities. The next subsection discusses the results of estimating Equations (7) and (8) with our data.

5.2 Results

5.2.1 Compensation conditional on being paid

We first investigate whether gender pay differences exist through the estimation of Equation (7) using only those managers receiving positive compensation in our sample. Table 8 shows the size of the gender gap varies widely with the set of controls and fixed effects in each specification. Column 1 shows the existence of a 17.8% gender gap when we control for manager and charity characteristics as well as fiscal year and state fixed effects. Columns 2 and 3 include officer title and NTEE fixed effects to find a 20% gap in compensation.[22] Finally, Columns 4 and 5 introduce organization and organization×title fixed effects, respectively. We find a gap of 8.1% and 5.3%, that is, the same organization pays a woman 8.1% and 5.3% less, respectively, than a man in the same job.

In the last four columns of Table 8, we restrict our sample to those managers in our matched LinkedIn sample. Our findings are qualitatively the same. Columns 6 and 7 use NTEE and charity fixed effects, respectively, showing a 15.6% and 4.9% gender gap. Columns 8 and 9, where we include manager-level controls, show similar results at 15.7% and 4.8%, respectively.[23]

[22] In unreported results, we find that not all positions are compensated equally. Within an industry, management position with the highest compensation have the largest gender gap. The opposite is true within an organization. Positions associated with the highest compensation levels have the smallest gender wage gap. We also find that the gender compensation gap varies across NTEE with the largest gap being in industries with the highest average compensation. These findings are available upon request.

[23] Additional regressions using the LinkedIn controls can be found in Appendix B.2 in Table B.10. The LinkedIn controls

Figure 1 highlighted that the share of women and average compensation differs according to organization size. The figure also displayed evidence of a wage gap throughout the size distribution. Next we explore whether the gap differs across organization size once we account for manager and organization characteristics. We separate our sample by quintiles of total annual revenue, and estimate Equation (7) under the specifications in Columns 3 and 4 of Table 8.[24] Our findings in Table 9 show that, within-industry, the gender gap is ubiquitous across organizations with largest gaps, up to 40%, in the smallest charities relative to 15% in the largest organizations. In contrast, our within-organization analysis (regressions in columns with even numbers) finds that the gender compensation gap is present only for managers working for organizations in the first (9.7%) and top two quintiles (6.7% and 10.6%, respectively).[25]

Finally, it is important to explore heterogeneity in paygaps across charity sectors (NTEEs). Figure 4 explores how the compensation gap changes across NTEEs. The figure shows estimated $Female_i$ coefficients in Equation (7) from separate regressions for each NTEE. Regardless of the NTEE, women are paid statistically significantly less (Figure 4a). Only organizations operating in the "Public Safety, Disaster Preparedness, and Relief" sector pay women more than men. The gap is largest in health care and mutual and membership benefit charities.[26] The gap is statistically zero in crime and legal-related charities as well as food, agriculture and nutrition charities. Once we introduce charities fixed effects (Figure 4b), we find the largest gaps in health care and public safety and relief charities. In this case, many NTEE sectors show no gap whatsoever. Examples are youth development (paying higher compensation to women), social science, food and nutrition, science and technology, civil rights and advocacy, and recreation and sports. This evidence suggests that gender paygaps are more prevalent in NTEEs with an affiliated private sector such as the health care sector, public safety and relief, or education.

5.2.2 Compensation vs. Pro Bono work

We estimate Equation (8) to investigate gender differences in the likelihood of receiving compensation. We report our findings in Table 10. Column 1 shows that female managers are 11.2 percentage points more likely to receive compensation controlling for CEO tenure, log of total charity revenue, membership dues, revenue from programs, net assets and dummies for the number of programs, as well as fiscal year and state fixed effects. Columns 2, 3, 4 and 5 add progressively to the specification title fixed effects, NTEE fixed effects, charity fixed effects, and charity×title fixed effects, respectively. Note the result is consistent across all specifications in Table 10. The addition of officer titles dummies in Column 2 explains most of the gap. Females are 2 to 3 percentage points more likely to be compensated than males are. Also note that in Column 5 we include charity×title fixed effects showing that females are still 1

are jointly significant for the within-industry analysis but insignificant for the within-organization analysis. The F-statistics (p-values) are 5.39 (0.003) and 2.53 (0.066) respectively.

[24]Table B.7 estimates Specification (7) breaking the gender dummy by year. We observe no significant changes over time in the gender pay gap when using charity fixed effects. The gap across organizations has decreased over time.

[25]Tables B.1 to B.6 in Appendix B.1 report the results of robustness checks. These include further separating the fourth and fifth quintiles, and interacting the female indicator with the NTEE and grouping the organizations by major source of revenue or expenses. We also estimate Specification (7) using the level of compensation instead of the logarithm of compensation. This allows us to include the unpaid managers in the estimation of the compensation gap. We consistently find that men are paid more across all these different specifications.

[26]Organizations such as volunteer fire departments, ambulance services, safety and rescue organizations fall under this industry.

percentage point more likely to receive compensation within a charity and job title.[27] Finally, Columns 6 to 9 use only the sample of managers we are able to match to LinkedIn profiles. The gap in the probability of receiving compensation is robust to the inclusion of age, education and experience controls using the proxies from Section 4.1.[28] In conclusion, although our analysis in the previous section shows female managers are paid less than their male counterparts conditional on receiving compensation, our findings in this section show that women in senior management positions of U.S. charities are more likely to receive compensation by at least 2 percentage points than male managers.

Despite the robust results in Table 10, it is important to study whether there is heterogeneity across non-profits. Figure 5 shows that the share of managers paid is clearly monotone and increasing with organization revenue. While the share of compensated managers is close to 20% in Quintile 1, 80% of managers in Quintile 5 are compensated.[29] Thus, we replicate the specifications of Columns 3 and 4 in Table 10 to determine if the gap in being compensated is consistently present across the size distribution. Table 11 shows that women are more likely to be compensated across all quintiles of total revenue.[30]

Figure 6 investigates the likelihood of compensation gaps in the different industries. Figure 6a reports the $Female_i$ coefficient in Equation (8) estimated separately for each NTEE. The majority of which are positive and significant. Meaning that women are more likely to be compensated. A few exceptions to this overall finding are religion-related charities, social science charities, and mutual and membership benefit charities. Once we account for charity fixed effects, the gaps remain mostly (Figure 6b). Only mutual and membership benefit charities are more likely to pay men.

Taking stock, this section has shown two distinct stylized facts. First, conditional on receiving compensation, women are paid 8.2% less than men in otherwise equal jobs and organizations. Second, women are up to 3.7% more likely to receive compensation when working as a manager in a U.S. charity. In the next section, we explore the role of potential mechanisms behind these facts.

6 Mechanisms

In this section, we focus on mechanisms that may explain the two empirical results established in the previous section. First, we hypothesize that the reason why women are more likely to be compensated than men is because charity employment is less likely to be the primary source of income for men relative to women. Second, we investigate whether the non-profit market for senior managers perceives males and females differently due to differences in performance. A mismatch in the link between pay and performance would be consistent with discrimination and stereotypes playing an active role in driving gender differences in pay. Let us next describe our empirical strategy for testing each of these hypotheses

[27] Table B.2 in Appendix B.1 replicates Columns 3 and 4 with interactions between the female indicator and the title dummies. A clear takeaway is that not all positions are equally likely to be compensated. CEOs and chief officers (CFO, COO) are more likely to be compensated. Women are more likely to be compensated regardless of their position except for women in the omitted title category of "Other" (secretary, administrator, and all other positions not classified into the five main titles). All coefficients on the interactions are positive and significant.

[28] Additional regressions using the LinkedIn controls can be found in Appendix B.2 in Table B.12. The LinkedIn controls are jointly significant in Column 8 and not jointly significant in Column 9. The F-statistics (p-values) are 17.12 (0.000) and 5.69 (0.002) respectively.

[29] Table B.7 in Appendix B.1 reports the estimates of Specification (8) where the gender dummy is separated by year. We observe no significant changes over time in the likelihood of receiving compensation for women relative to men.

[30] As a robustness check, we also separate the organizations according to their primary source of expenses or revenue and run the same analysis in Tables B.8 and B.9 of Appendix B.1. Our finding that women are more likely to receive positive compensation for managing a non-profit organization is robust to all divisions of the working sample.

and the respective results.

6.1 Charity employment as primary income source

Using LinkedIn information, we can test whether gender differences in the likelihood of being paid is correlated with self-reported retiree and student status, as well as whether managers report working elsewhere while managing their respective charities.

Panel A of Table 12 displays differences in the probability of being retired for unpaid and paid managers. Male unpaid managers are 0.5 percentage points more likely to be retired than female unpaid managers, while male paid managers are 0.1 percentage points less likely to be retired than female paid managers. In the end, there is a difference-in-difference of 0.6 percentage points, statistically significant at the 10% level. Panel B shows that unpaid female managers are 0.7 percentage points more likely to be students than male unpaid managers. The difference-in-difference estimate is a statistically significant 1.4 percentage points. This supports our hypothesis that male managers are less likely to be students when unpaid and have other sources of income besides charity employment. Consistently with both these results, Panel D shows that males are older than females in our sample for both unpaid and paid managers. Interestingly, unpaid managers are always older than paid managers regardless of gender, and male managers are older than female managers. These two facts reinforce the evidence that male managers are less likely to be paid because they are overall older than female managers in our sample. Note this is consistent with the findings in Panel A on retiree status.

Panels E and F explore whether managers report having other jobs while working at a charity. Panel E shows that paid managers have more additional jobs than unpaid managers regardless of their gender, and male managers hold more jobs than female managers. But combining the two differences, we see that unpaid males hold fewer jobs. In fact, panel F shows that female unpaid managers are 2 percentage points less likely to have at least another job, but there are no significant differences between genders among paid managers. This is consistent with our findings in Panel A that male unpaid managers are more likely to be retired and receive income from other sources.

Table 12 also explores differences in volunteering profiles across genders for paid and unpaid managers. Panel C reports that female managers are more likely to volunteer somewhere, but there are no differences in volunteering (as reported in LinkedIn) across unpaid and paid gender differences. Similarly, Panels G and H show no statistically significant differences in volunteering at other organizations in the past.

Alternatively, using the entire LinkedIn sample, we test differences in the likelihood of having a LinkedIn profile as this fact is highly correlated with being active in the job market, networking, and looking for a career change. Panel I of Table 12 shows that unpaid women are marginally more likely to have a LinkedIn profile than unpaid men and the same is true for paid managers. This is consistent with our hypothesis in that women appear to be more likely to be actively networking and looking for a job than unpaid men who are less active or already out of the job market.

6.2 Differences in pay and impact on performance

We investigate now why, conditional on being paid, a female manager earns 8% less than her male counterpart. We hypothesize that the gender pay gap may be driven by a misperception of the impact

of women managers on the performance of U.S. charities. Thus, our null hypothesis would entail that there are no differences in pay-for-performance between genders, that is, differences in pay are driven by differences in performance.

To shed light on the empirical validity of this explanation, we first follow the methodology proposed by Abowd et al. (1999) to determine whether the non-profit market perceives male and female managers differently. To do so, we start by defining a connected set of manager-organization pairs which consists of all managers at organizations with movers, where movers are managers observed at multiple organizations throughout the sample period. The movers allow us to separate the variation in compensation ($comp._{it}$) explained by the managers (i.e. manager fixed effects) from the variation in compensation linked to the charity (i.e. organization fixed effects). Then, we estimate the manager fixed effects from the following equation:

$$comp._{it} = X_{jt}^{T}\beta + \gamma tenure_{ij(i,t)t} + titles^{T}\delta + \lambda_t + \alpha_i + \psi_{j(i,t)} + \epsilon_{it} \tag{9}$$

where $comp._{it}$ is the compensation of manager i at time i measured in levels. We use levels of compensation to see the range in manager and organization fixed effects in monetary terms. X_{jt}^{T} is a set of organization controls that are time variant. We select membership dues, program service revenue, and total net assets as the organization controls. The variable $tenure_{ij(i,t)t}$ is how long manager i has been managing organization j at time t. We also add a set of dummies for the different manager titles observed in our data, $titles$, fiscal year fixed effects, λ_t, and organization fixed effects, $\psi_{j(i,t)}$. The subscript $j(i,t)$ is a mapping for manager i to organization j at year t (Janke et al., 2019). Lastly, we include manager fixed effects, α_i. Although non-mover managers at connected organizations are included, the manager fixed effects are only identified for managers that move from one organization to another.

Once we have estimated Equation (9) above, we test the joint significance of the manager fixed effects. Testing for joint significance examines whether a significant part of the variation in compensation is explained by differences in managers. We repeat the exercise separately for males and females. We show results in Table 13.[31] Overall we find managers are perceived as differentiated with 17.28% of the variation in compensation explained by the managers, and a p-value $< 0.01\%$ for the F-test suggesting manager fixed effects are different from each other. When investigating differences of manager fixed effects separately by gender, we observe statistically significant differences for male managers, but we do not for female managers where the variance explained is a statistically insignificant 7.63% (relative to 13.61% for males) and a p-value of 100% for the F-test (relative to $< 0.01\%$ for males).

Second, we want to contrast empirically whether the lack of perceived differentiation among females is paralleled by their ability (or lack-thereof) to "leave-their-mark" on the organizations they manage. To investigate the impact of managers on charities, we follow the methodology of Bertrand and Schoar (2003) and Janke et al. (2019) using performance as dependent variable. In contrast to the fixed effects in the previous compensation exercise, only managers observed at two organizations for at least two years are included in this estimation subsample. This ensures that enough time has passed for managers to "leave their mark" and that practices are correlated across organizations (Bertrand and Schoar, 2003; Janke et al., 2019).

[31] Descriptive statistics for the subsample of managers at organizations with movers can be found in Appendix B.3 in Tables B.14 and B.15.

The equation estimated is as follows:

$$y_{jt} = X_{jt}^{T}\beta + \gamma tenure_{ij(i,t)t} + titles^{T}\delta + \lambda_t + \alpha_i + \psi_{j(i,t)} + \epsilon_{it} \tag{10}$$

where y_{jt} are various measures of charity performance standardized to have mean zero and standard deviation one (Janke et al., 2019). We use the same set of time variant organization controls, X_{jt}, as in Equation (9). The variable $tenure_{ij(i,t)t}$ is how long manager i has been managing organization j at time t, and $titles$ is a set of dummies controlling for the different positions of the managers. The regression includes year fixed effects, λ_t, and organization fixed effects, $\psi_{j(i,t)}$. The object of interest is α_i, the manager fixed effects. In this case, only managers observed at two organizations for at least two years are included in the sample and the manager fixed effects are identified by managers moving from one organization to another.

Once we estimate Equation (10), we test the joint significance of the manager fixed effects, α_i. In this case, the test is telling us whether a significant part of the variation in charity performance is explained by the managers. Reached this point, it is important to acknowledge that our measures of charity performance are not direct measures of productivity or TFP. These are organization-level outcomes that are correlated with performance in the context of charities.

Results in Table 14 show that managers have an impact on charity performance for almost all measures, with the exception of the number of employees. Unlike the previous exercise, we do not find gender differences in the statistical significance of the impact on performance across all performance measures examined (with the exception of % volunteers where female managers are leaving a mark and men are not). Both men and women have the ability to leave their mark on the organizations they manage.

In summary, there is a mismatch between the dispersion of pay among men and women that is not paralleled by the dispersion of impact on performance among men and women. Going back to our initial results, we hypothesize that the gender pay gap observed in Section 5.2 is the result of misperception that women managers are not differentiated among themselves. The next step is then to pair differences in pay with differences in performance as estimated in this section, and empirically show whether better performing managers receive higher pay regardless of their gender.

6.3 Linking Performance and Pay

In the previous section, we found that manager fixed effects of compensation are not statistically different from each other for women while they are for men. We also found that the manager fixed effects of performance are statistically different of each other for both men and women respectively. An explanation for this mismatch across genders may be that men perform better than women. Alternatively, better performing women may not get paid more for better performance, whereas better performing men do. We investigate these possible explanations as a potential mechanism behind the gender differences in pay documented above.

To do so, we group managers by performance fixed effect decile for each one of our performance variables used in the previous section. For each decile in the overall performance distribution of each variable, we separate managers by gender. For each gender-decile, we compute the average value of both their respective performance and pay fixed effects. For the time being, we focus our attention here

to non-profit revenues and plot the resulting averages of performance (horizontal axis) and pay (vertical axis) in Figure 7 at the manager level. A perfect link between pay and performance would show a monotone relationship between the dots. We find that there are no gender pay differences for lower performers. Yet, as we move from left to right in the graph, gender pay differences become larger (both in magnitude and statistical significance). Most noticeably, the evidence in Figure 7 shows that better performing women (far right red circle) have a compensation far worse than other men with similar performance (far right blue circle). [32]

In summary, we find that better performing men receive higher compensation than better performing women. We also observe that better performance does not always mean better compensation for women, but it generally does for men. It is important to recall Equation (6) in our theoretical framework described in Section 3.2. On the one hand, by grouping female and male managers by deciles of performance fixed effects, we are in fact holding constant performance of these managers. On the other hand, because we obtain the compensation fixed effect at the manager level from Specification (9) which is estimated using data from a short period of time within a manager's life, it could be assumed that opportunity costs and preferences are constant over this period of time. Thus, under these assumptions, our evidence suggests that the observed gender pay differences among top performing managers in our working sample must come from either differences in firm bargaining behavior or firm preferences (Bertrand, 2020), that is, firm discriminatory behavior toward women managers, and not from gender differences in preferences or sensitivity to performance pay (Bandiera et al., 2021; Aksoy et al., 2025).

7 Conclusion

In this paper, we study gender pay differences in the context of senior management of U.S. charities. While there is previous evidence of gender pay differences in management, U.S. charities provide an interesting and novel setting that differs much from previously studied environments such as the private sector, government agencies, and publicly traded companies. On the one hand, female labor participation in U.S. charities is 73%, higher than the female labor participation in the economy which is around 47%. On the other hand, U.S. charities do not resemble most sectors in the economy in that female representation of senior leadership is higher at around 44% (2% elsewhere according to Gupta et al. (2018)). While the former attenuates concerns of gender selection into the charities sector, the latter highlights that lack of female representation in leadership positions cannot be a significant driver of the existing gender gap in senior management among U.S. charities as it can be in other industries (Ashraf et al., 2024). Moreover, this sector is singular in that profits and benefits are hard to quantify, and so are short-term and long-term goals in employment contracts. This last fact diminishes the importance of gender differences in competitive attitudes and selection into incentive contracts (Niederle and Vesterlund, 2007). Thus, organizations in this sector are defined around purpose (instead of profits) which may shift responsibility for gender pay gaps from money goals to alternative theories of gender discrimination such as taste for discrimination and the role of stereotypes in generating differences in

[32] We provide similar figures for this and other performance measures (revenues, expenses, share of volunteers, etc) in Appendix B.3. Additionally, we undertake this exercise for all performance measures for three different samples: all organizations in the sample of movers in, those organizations that employ both men and women senior managers, and those organizations that either only employ men or only employ women. While the same pattern appears to be pervasive across all three samples, evidence coming from organizations employing both men and women seem to be driving our general findings.

the perception of productivity (Bertrand, 2020).

To study gender pay differences in this setting, we use novel data from different sources measuring a variety of dimensions of the non-profit sector. We divide our empirical strategy into two distinct parts. In the first part of the paper, we show that a large share of senior managers do not receive compensation for their work. Then, we use cross-sectional reduced form evidence to highlight two new stylized facts, to the best of our knowledge, not previously mentioned in the literature. We find that (i) women are up to 2 percentage points more likely to receive compensation than men, and (ii) conditional on receiving compensation, men are paid 8% more than women.

In the second part of the paper, we explore mechanisms driving our two empirical findings established earlier. First, we investigate reasons behind the gender gap in receiving any compensation, that is, women are more likely to receive compensation than men in our sample. We find evidence suggesting unpaid male managers are at a later stage in their careers than female managers. Male managers are older, more likely to be retired, less likely to be students, have fewer jobs while concurrently managing a charity, report less (additional) volunteering, and are less likely to have a LinkedIn profiles. Overall, these facts seem to suggest that male managers in the sample rely on other means of income beyond their charity compensation, while this appears to be less likely for female managers. This would explain the higher likelihood of male managers to manage these organizations without requiring compensation.

Second, we use well-established methodology from Abowd et al. (1999) and Bertrand and Schoar (2003) to explore a gender mismatch between pay and performance as a potential mechanism that could explain the compensation gaps presented in the first half of the paper. Using the sample of managers moving organizations in the data, we are able to separately identify manager- and organization-specific performance and compensation fixed effects. We find evidence consistent with the market perceiving male managers to be differentiated (some are better than others), but perceiving women as undifferentiated. In contrast to this perception, we find that both female and male managers can significantly affect organization performance. In further exploration, we show that this mismatch between pay and performance across genders is driven by the fact that best performing men receive higher compensation, whereas best performing women do not (even among women). Because we can hold manager performance and preferences constant, our findings suggest that gender paygaps in charities are driven by gender discrimination and stereotyping perceptions of the impact of female managers on organization performance.

Our findings have important implications for policies that aim to narrow the gender gap in senior management. In particular, the empirical evidence presented shows that establishing quotas of female managers in senior management is probably not going to make paygaps disappear. Similarly, policies that homogenize incentive contracts attenuating selection into contracts are unlikely to be effective. Our evidence shows that gender paygaps in our setting are caused by misperception. Therefore, policies aiming to correct the information gap may be most effective.

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Table 1: Descriptive statistics – Gender

	Freq.	Percent
Male	187,839	55.96
Female	147,850	44.04
Total	335,689	100.00

Table 2: Descriptive statistics – Share receiving compensation

	All		**Female**		**Male**	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Unpaid	543,581	54.41	198,428	48.53	345,153	58.49
Paid	455,412	45.59	210,442	51.47	244,970	41.51
Total	998,993	100.00	408,870	100.00	590,123	100.00

Table 3: Descriptive statistics – Average compensation

	All				**If paid**			
	Obs.	Mean	Median	S.d.	Obs.	Mean	Median	S.d.
Male	590,123	80,758.17	0.00	252,015.37	244,970	194,543.21	117,762.00	361,747.76
Female	408,871	58,593.83	10,000.00	109,771.53	210,442	113,842.85	84,183.50	130,753.40
Total	998,994	71,686.68	0.000	206,307.06	455,412	157,252.26	99,000.00	282,6683.99

Table 4: Descriptive statistics – Turnover

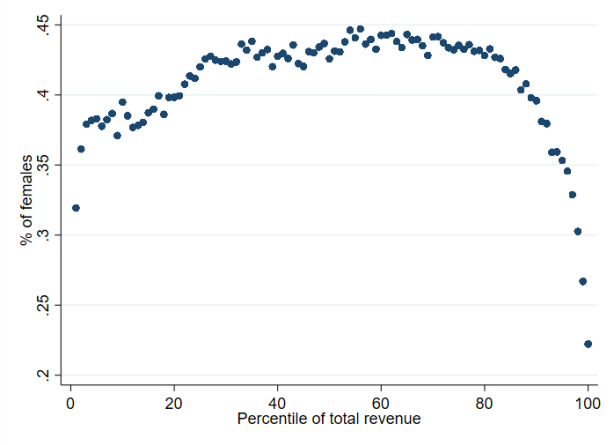
Panel A: Unpaid/paid

		Current Manager		
		Unpaid	Paid	Total
Past Manager	Unpaid	0.564	0.107	0.671
	Paid	0.102	0.226	0.328
	Total	0.666	0.333	1.000

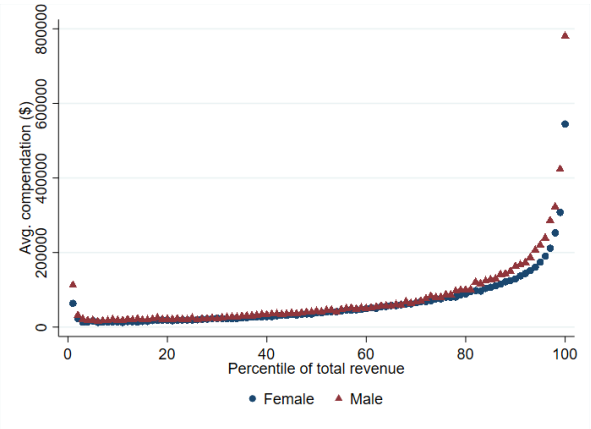
Panel B: Male/Female

		Male	Female	Total
Past Manager	Male	0.390	0.189	0.579
	Female	0.166	0.255	0.421
	Total	0.556	0.444	1.000

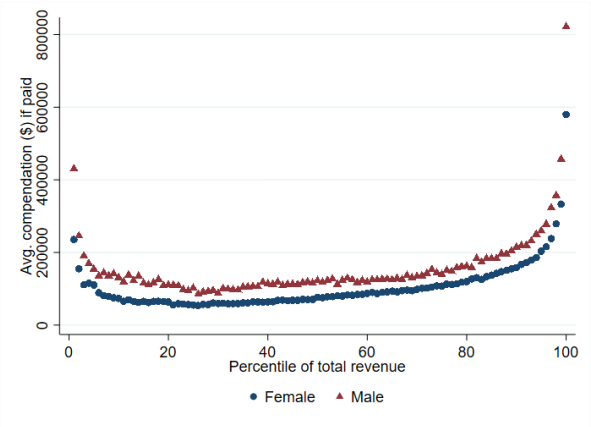
Notes: Transition probabilities conditional on having a turnover episode during the sample.



(a) Share of women by revenue percentile



(b) Average compensation for men and women (including non-compensated managers)



(c) Average compensation for men and women conditional on being compensated)

Figure 1: Share of women and compensation by percentiles of total revenue

Table 5: Descriptive Statistics – Manager variables

	Obs.	Mean	S.d.
No. of organizations	335,689	1.171	1.077
Multiple organizations per year (%)	335,689	0.031	0.174
Multiple organizations over time (%)	335,689	0.063	0.243
Tenure	393,102	2.541	1.862

Notes: *No. of organizations* represents the count of charities that the manager is observed at in our sample, *Multiple organizations per year* is an indicator for whether a manager is observed in charge of multiple charities in a year at any point in the sample, and *Multiple organizations over time* is an indicator taking a value of one for officers managing multiple organizations but not during the same year. *Tenure* is the number of years a manager is at a charity. This is reported for each manager-charity observation.

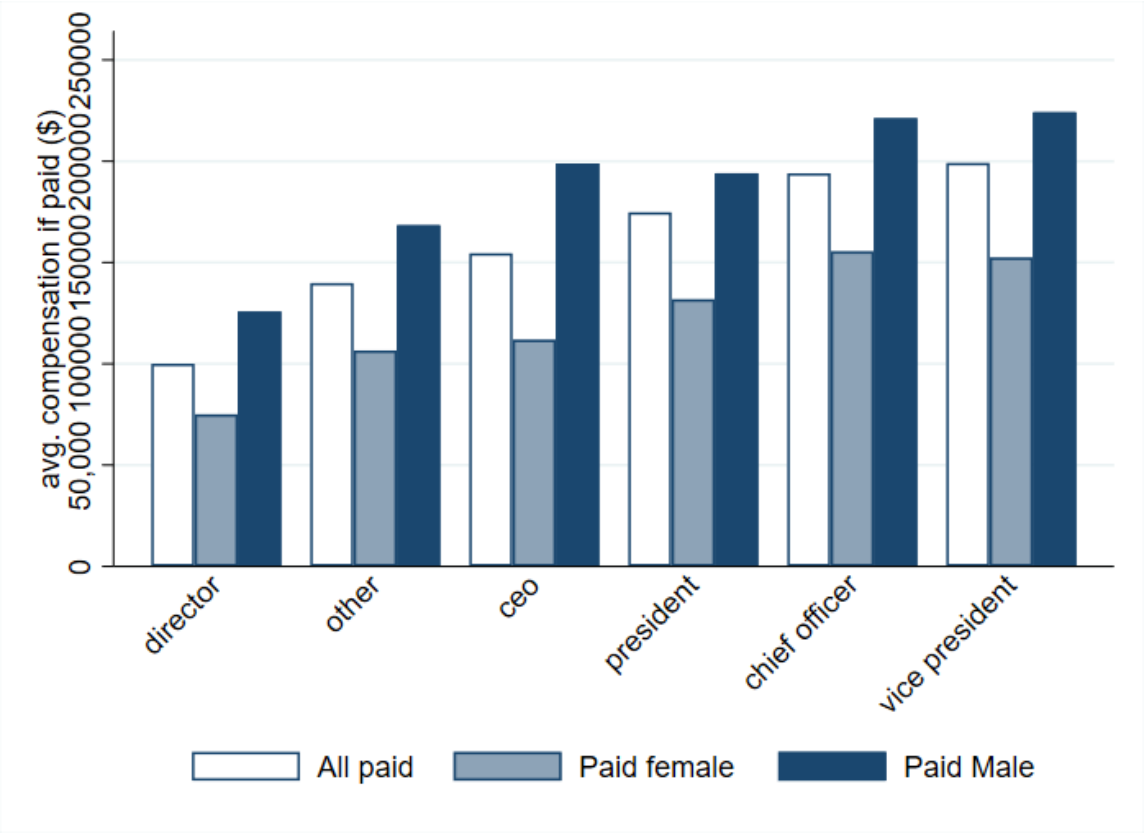


Figure 2: Average compensation by title

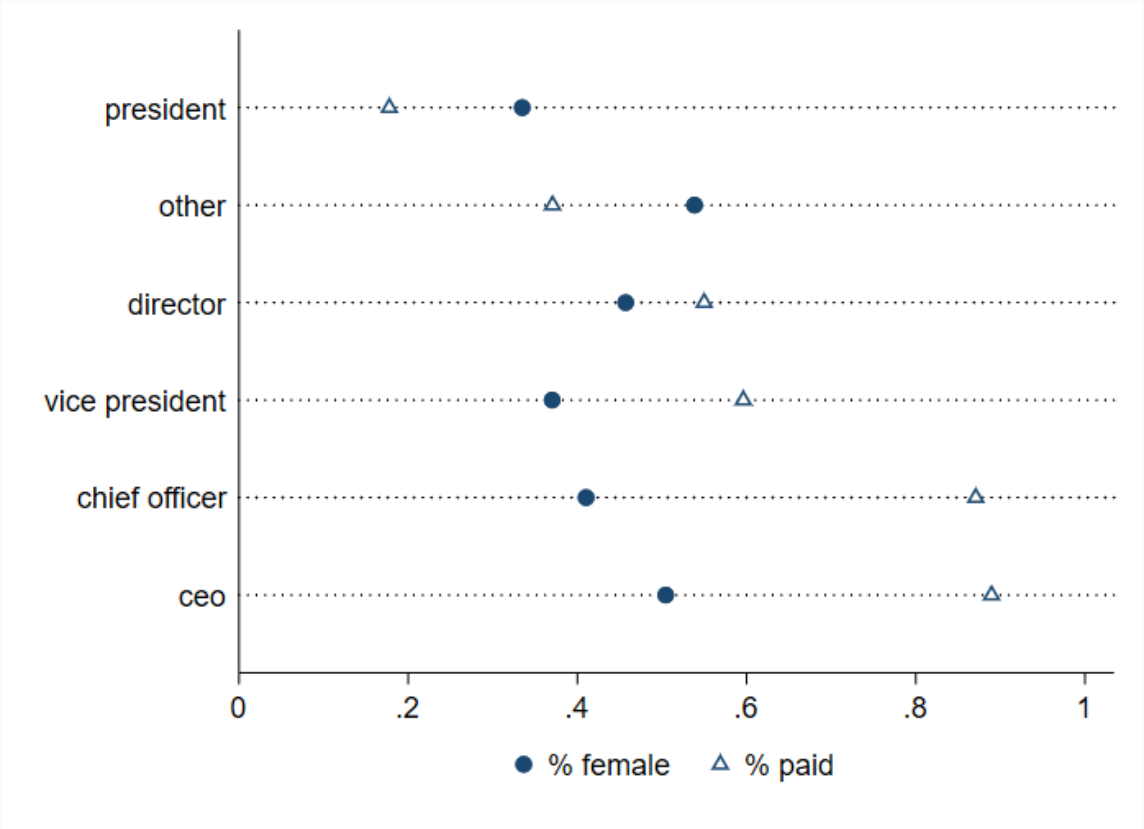


Figure 3: Share of compensated managers and share of females by title

Table 6: Descriptive Statistics – Organization variables

	Obs.	Mean	S.d.	Median	p99
Total revenue	998,993	84.9476	1,231.858	5.497	1,282.265
Government grants	998,993	15.901	208.707	1.718	200.139
Total contributions	998,993	21.914	247.694	2.053	284.604
Membership dues	998,993	0.237	4.830	0.000	3.701
Program service rev.	998,993	57.686	1,129.979	0.721	886.172
Total expenses	998,993	79.861	1,180.946	5.163	1,213.615
Program expenses	998,993	68.989	1,090.841	4.218	1,048.761
Administration expenses	998,993	9.689	115.717	0.600	142.718
Fundraising expenses	998,993	1.183	16.408	0.000	17.050
Total net assets	998,993	98.427	1,636.136	5.456	1,473.972
Total liabilities	998,993	58.765	1,062.847	0.600	924.919
Total assets	998,993	157.192	2,452.116	8.390	2,329.211
Number of employees	998,993	93.544	2,113.833	5.000	1,416.000
Volunteers	768,179	1,269.303	186,342.752	25.000	4,600.000

Notes: All variables in $100,000. Total contributions is the sum of donations (direct and indirect support) and government grants.

Table 7: Descriptive Statistics – Manager variables (LinkedIn)

	Obs.	Mean	S.d.
Age	27,373	54.187	10.224
College degree	54,267	0.375	0.484
Graduate degree	54,267	0.189	0.391
Volunteer	54,267	0.190	0.392
Student	54,267	0.025	0.156
Retired	54,267	0.031	0.174
No. of jobs listed	54,267	2.650	2.611
No. of other jobs listed	54,267	2.395	2.567
No. of other volunteering org.	54,267	0.614	2.024

Table 8: Results – Compensation

	Full Sample					**LinkedIn Subsample**			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)
I(female)	-0.178***	-0.207***	-0.216***	-0.084***	-0.053***	-0.156***	-0.049*	-0.157***	-0.048*
	(0.048)	(0.039)	(0.033)	(0.022)	(0.013)	(0.022)	(0.027)	(0.022)	(0.026)
Manager tenure	0.061***	0.062***	0.062***	0.053***	0.054***	0.060***	0.055***	0.060***	0.053***
	(0.007)	(0.007)	(0.004)	(0.002)	(0.002)	(0.004)	(0.005)	(0.004)	(0.005)
Total revenue (log)	0.280***	0.275***	0.258***	0.082***	0.081***	0.269***	0.054***	0.268***	0.054***
	(0.027)	(0.026)	(0.019)	(0.019)	(0.011)	(0.018)	(0.011)	(0.018)	(0.011)
Constant	7.312***	7.227***	7.705***	9.535***	9.662***	7.341***	9.878***	7.341***	9.875***
	(0.399)	(0.383)	(0.252)	(0.247)	(0.295)	(0.215)	(0.415)	(0.217)	(0.409)
Controls	X	X	X	X	X	X	X	X	X
Officer titles		X	X	X		X	X	X	X
NTEE			X			X		X	
Charity				X			X		X
Charity × Officer titles					X				
LinkedIn Controls								X	X
N	452,261	452,261	452,261	452,261	424,389	115,675	115,675	115,675	115,675
adj. R-sq	0.291	0.300	0.345	0.874	0.892	0.351	0.886	0.352	0.886

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects.

Table 9: Results – Compensation (Quintiles of total revenue)

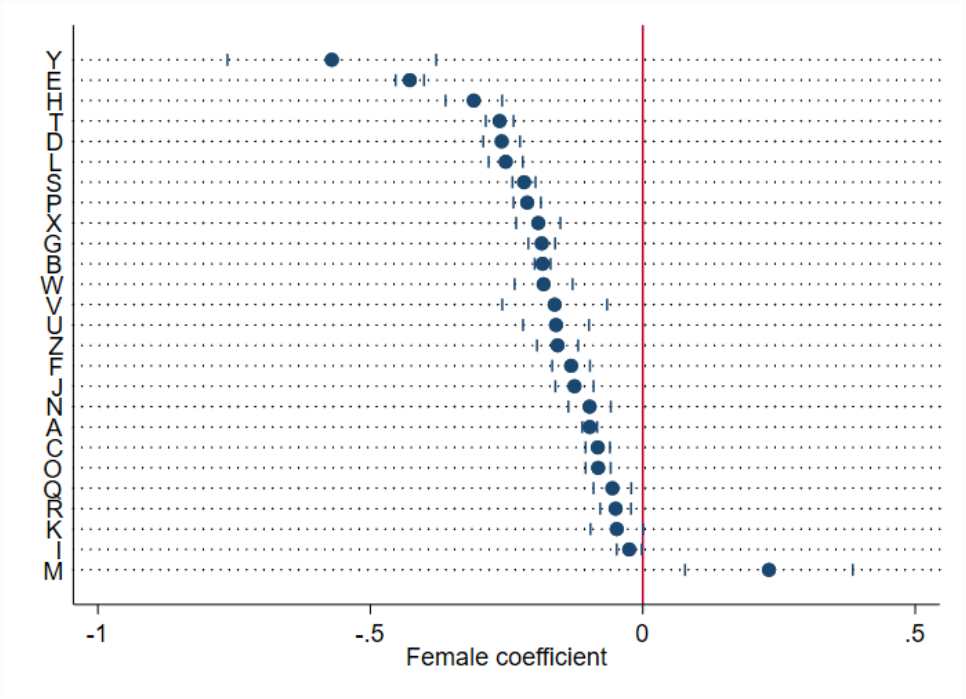
	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)
I(female)	-0.405***	-0.097*	-0.255***	-0.025	-0.196***	-0.036	-0.151***	-0.067***	-0.147***	-0.106***
	(0.059)	(0.053)	(0.038)	(0.036)	(0.034)	(0.032)	(0.029)	(0.018)	(0.036)	(0.025)
Manager tenure	0.041***	0.037***	0.067***	0.037***	0.063***	0.049***	0.056***	0.056***	0.054***	0.061***
	(0.009)	(0.009)	(0.009)	(0.008)	(0.006)	(0.004)	(0.005)	(0.003)	(0.004)	(0.002)
Total revenue (log)	-0.089***	0.047***	0.299***	0.247***	0.338***	0.188***	0.300***	0.138***	0.292***	0.099***
	(0.019)	(0.016)	(0.051)	(0.035)	(0.048)	(0.023)	(0.021)	(0.012)	(0.008)	(0.012)
Constant	11.592***	10.037***	6.875***	5.569***	6.237***	7.613***	6.898***	9.034***	6.866***	10.505***
	(0.314)	(0.699)	(0.657)	(0.789)	(0.574)	(0.414)	(0.276)	(0.207)	(0.143)	(0.340)
Controls	X	X	X	X	X	X	X	X	X	X
Officer titles	X	X	X	X	X	X	X	X	X	X
NTEE	X		X		X		X		X	
Charity		X		X		X		X		X
N	28,125	28,125	55,736	55,736	82,289	82,289	121,697	121,697	164,414	164,414
adj. R-sq	0.235	0.903	0.160	0.866	0.155	0.859	0.13	0.818	0.349	0.831

Notes: Quintiles of total revenue. Quintile 1 lowest total revenue. Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects. Column (1) includes NTEE fixed effects and Column (2) include organization fixed effects.

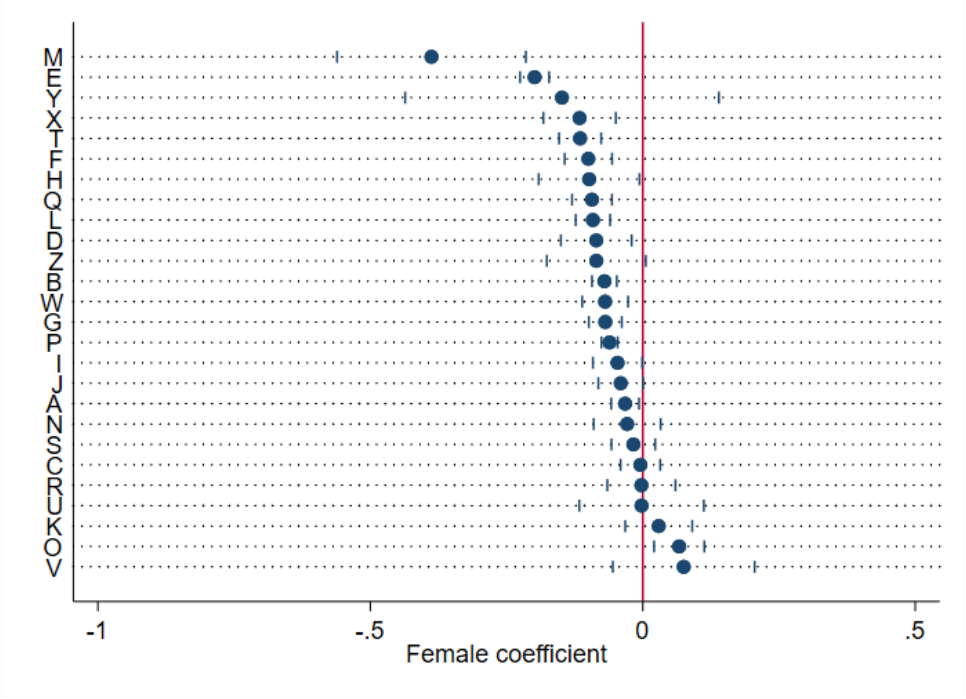
Table 10: Results – Likelihood of compensation

	Full Sample					**LinkedIn Subsample**			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)
I(female)	0.112***	0.016**	0.019***	0.029***	0.009***	0.028***	0.047***	0.028***	0.047***
	(0.012)	(0.007)	(0.004)	(0.004)	(0.001)	(0.005)	(0.007)	(0.005)	(0.007)
Manager tenure	0.047***	0.030***	0.029***	0.006***	0.005***	0.029***	0.005***	0.030***	0.005***
	(0.003)	(0.002)	(0.002)	(0.000)	(0.000)	(0.002)	(0.001)	(0.002)	(0.001)
Total revenue (log)	0.102***	0.057***	0.057***	0.013***	0.010***	0.056***	0.014***	0.056***	0.014***
	(0.004)	(0.005)	(0.006)	(0.002)	(0.001)	(0.006)	(0.002)	(0.006)	(0.002)
Constant	-1.070***	-0.451**	-0.433***	0.034	0.118	-0.403***	0.135*	-0.405***	0.127*
	(0.056)	(0.053)	(0.055)	(0.124)	(0.098)	(0.054)	(0.070)	(0.054)	(0.070)
Controls	X	X	X	X	X	X	X	X	X
Officer titles		X	X	X		X	X	X	X
NTEE			X			X		X	
Charity				X			X		X
Charity X Officer titles					X				
LinkedIn Controls								X	X
N	988,210	988,210	988,210	988,210	935,467	237,045	237,045	237,045	237,045
adj. R-sq	0.226	0.510	0.524	0.854	0.905	0.545	0.879	0.545	0.879

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects.



(a) Compensation gap by NTEE



(b) Compensation gap by NTEE (charity fixed effects)

Figure 4: Compensation gap across industries

A- Arts, culture & humanities; B- Education; C- Environment; D- Animal-related; E- Health care; F- Mental health & crisis intervention; G- Voluntary health associations & medical disciplines; H- Medical research; I- Crime & legal-related; J- Employment; K- Food, agriculture & nutrition; L- Housing & Shelter; M- Public safety, disaster preparedness & relief; N- Recreation & sports; O- Youth development; P- Human services; Q- International, foreign affairs & national security; R- Civil rights, social action & advocacy; S- Community improvement & capacity building; T- Philanthropy, voluntarism & grant formation; U- Science & technology; V- Social Science; W- Public & societal benefit; X- Religion-related; Y- Mutual & membership benefit; Z- Unknown

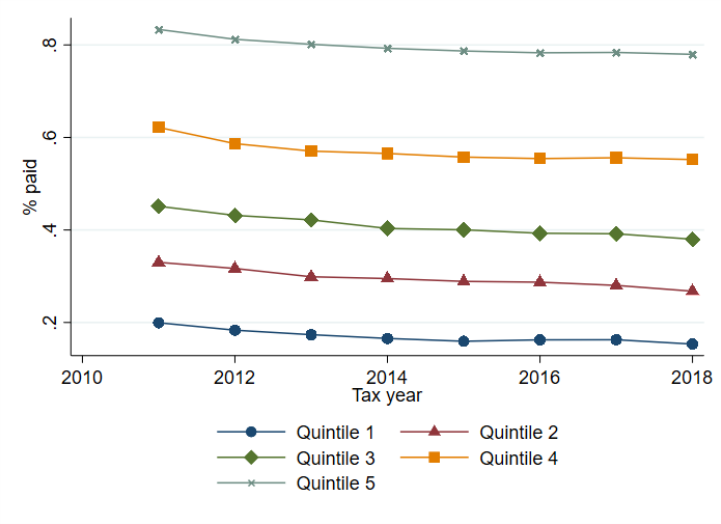
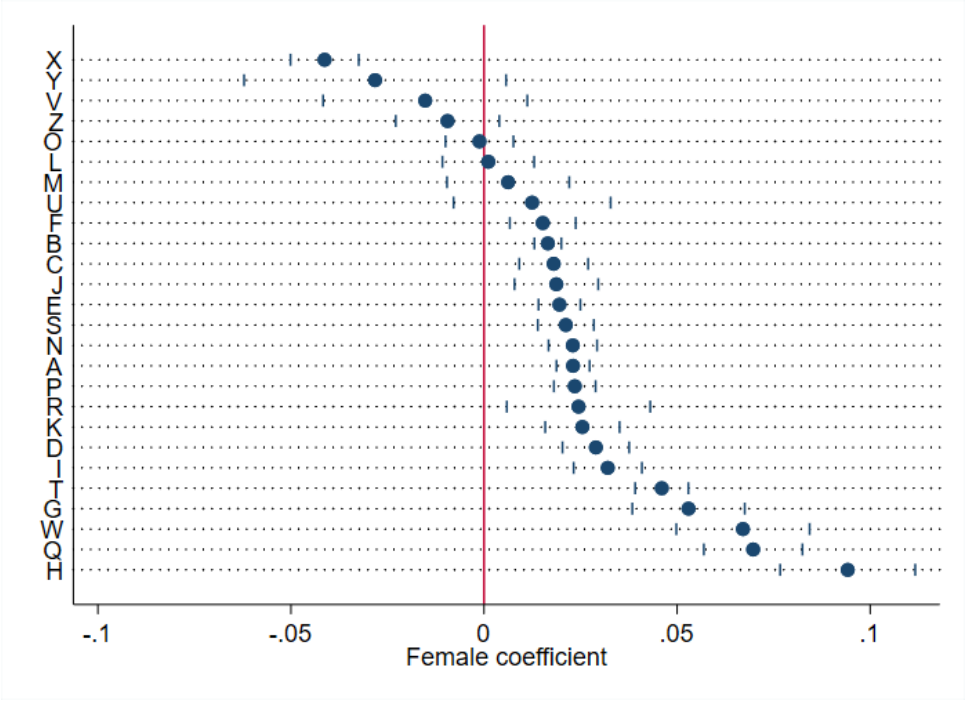


Figure 5: Share of manager compensated by quintiles of total revenue

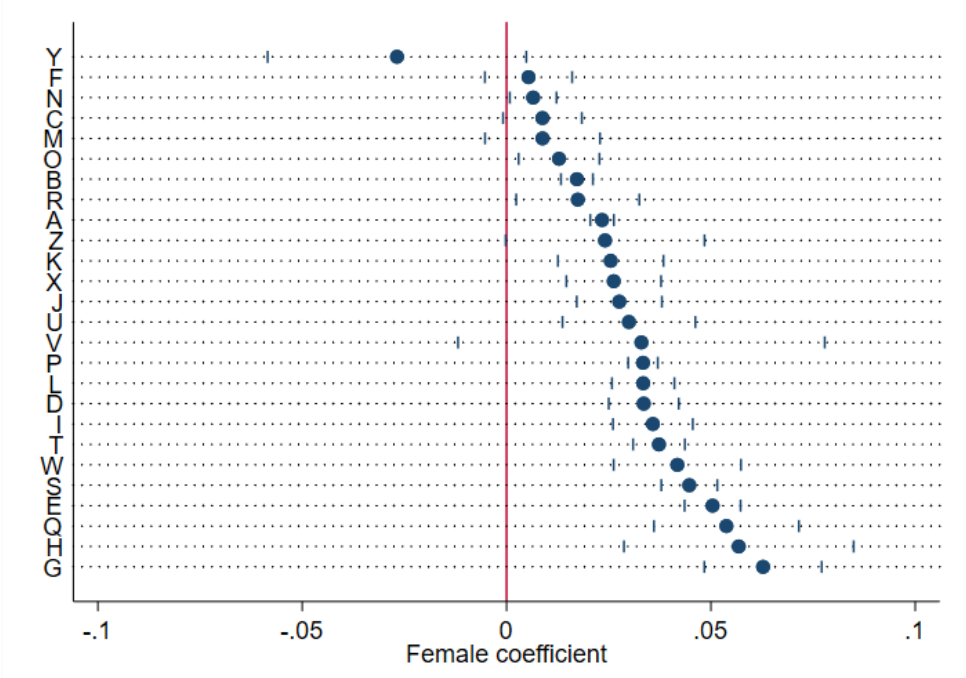
Table 11: Results – Likelihood of compensation (Quintiles of total revenue)

	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)
I(female)	0.012**	0.018***	0.027***	0.032***	0.026***	0.027***	0.019***	0.027***	0.010***	0.016*
	(0.005)	(0.003)	(0.005)	(0.006)	(0.007)	(0.003)	(0.005)	(0.005)	(0.004)	(0.009)
Manager tenure	0.014***	0.001	0.022***	0.002	0.030***	0.006***	0.034***	0.008***	0.034***	0.011***
	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.004)	(0.001)
Total revenue	0.012***	0.006***	0.078***	0.013**	0.046***	0.019***	0.065***	0.019***	0.049***	0.012***
	(0.004)	(0.001)	(0.007)	(0.005)	(0.011)	(0.006)	(0.008)	(0.005)	(0.014)	(0.003)
Constant	0.001	0.062	-0.778***	-0.073	-0.383***	0.578***	-0.496***	0.017	-0.114	0.490***
	(0.039)	(0.049)	(0.079)	(0.107)	(0.127)	(0.118)	(0.112)	(0.138)	(0.187)	(0.083)
Controls	X	X	X	X	X	X	X	X	X	X
Officer title	X	X	X	X	X	X	X	X	X	X
NTEE	X		X		X		X		X	
Charity		X		X		X		X		X
N	173,390	173,390	190,123	190,123	202,812	202,812	214,750	214,750	207,135	207,135
adj. R-sq	0.295	0.828	0.408	0.832	0.459	0.848	0.487	0.848	0.358	0.807

Notes: Quintiles of total revenue. Quintile 1 lowest total revenue. Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects. Column (1) includes NTEE fixed effects and Column (2) include organization fixed effects.



(a) Likelihood of compensation gap by NTEE



(b) Likelihood of compensation gap by NTEE (charity fixed effects)

Figure 6: Likelihood of compensation gap across industries

A- Arts, culture & humanities; B- Education; C- Environment; D- Animal-related; E- Health care; F- Mental health & crisis intervention; G- Voluntary health associations & medical disciplines; H- Medical research; I- Crime & legal-related; J- Employment; K- Food, agriculture & nutrition; L- Housing & Shelter; M- Public safety, disaster preparedness & relief; N- Recreation & sports; O- Youth development; P- Human services; Q- International, foreign affairs & national security; R- Civil rights, social action & advocacy; S- Community improvement & capacity building; T- Philanthropy, voluntarism & grant formation; U- Science & technology; V- Social Science; W- Public & societal benefit; X- Religion-related; Y- Mutual & membership benefit; Z- Unknown

Table 12: Differences in characteristics

	Panel A - % Retired			
	All	*If unpaid*	*If paid*	*Diff. (U-P)*
Total	0.031	0.038	0.019	0.020***
Male	0.033	0.041	0.018	0.022***
Female	0.028	0.036	0.019	0.018***
Diff. (M-F)	0.005***	0.005**	-0.001	0.006*
Obs.	54,267			
Panel B - % Student				
Total	0.025	0.023	0.028	-0.005***
Male	0.024	0.020	0.032	-0.012***
Female	0.026	0.027	0.025	0.002
Diff. (M-F)	-0.002*	-0.007***	0.007***	-0.014***
Obs.	54,267			
Panel C - % reporting volunteering in LinkedIn				
Total	0.190	0.187	0.195	-0.008**
Male	0.180	0.178	0.184	-0.006
Female	0.202	0.199	0.204	-0.005
Diff. (M-F)	-0.021***	-0.021***	-0.020***	-0.001
Obs.	54,267			
Panel D - Age				
Total	54.19	54.63	53.53	1.10***
Male	55.20	55.48	54.65	0.83***
Female	53.01	53.39	52.57	0.82***
Diff. (M-F)	2.19***	2.09***	2.08***	0.004
Obs.	27,467			
Panel E - Other jobs (levels)				
Total	2.40	2.37	2.44	-0.07***
Male	2.46	2.42	2.54	-0.12***
Female	2.34	2.32	2.36	-0.05
Diff. (M-F)	0.12***	0.10***	0.177***	-0.08*
Obs.	54,267			
Panel F - Other jobs (I(list other jobs on LinkedIn))				
Total	0.831	0.853	0.797	0.057***
Male	0.839	0.860	0.799	0.060***
Female	0.821	0.844	0.794	0.050***
Diff. (M-F)	0.018***	0.016***	0.005	0.011
Obs.	54,267			
Panel G - Volunteer at other organization (levels)				
Total	0.617	0.616	0.617	-0.001
Male	0.597	0.604	0.584	0.020
Female	0.639	0.634	0.645	-0.011
Diff. (M-F)	-0.042**	-0.030	-0.061**	0.032
Obs.	54,267			
Panel H - I(volunteers at other organization)				
Total	0.114	0.115	0.112	0.003
Male	0.107	0.109	0.102	0.007*
Female	0.121	0.122	0.119	0.003
Diff. (M-F)	-0.014***	-0.013***	-0.017***	0.004
Obs.	54,267			
Panel I - % LinkedIn profile				
Total	0.124	0.124	0.125	-0.001
Male	0.114	0.115	0.112	0.003**
Female	0.137	0.136	0.137	-0.007
Diff. (M-F)	-0.022***	-0.021***	-0.025***	0.004*
Obs.	335,689			

Notes: $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$.

Table 13: Results – Fixed effects in pay

	F-test (p-value)	R^2	Adj. R^2	Obs.	Variance proportion (%) Covariates	Charity	Manager	Residuals
All managers	1.575 (0.000)	0.884	0.825	292,233	5.75	65.35	17.28	11.61
Female	0.949 (1.00)	0.902	0.853	100,329	16.95	65.65	7.63	9.78
Males	1.729 (0.000)	0.881	0.823	184,680	4.24	70.21	13.61	11.94

Notes: p-values in parentheses.

Table 14: Results – Fixed effects in performance – F-test on fixed effects

	All			Female			Male		
	F-stat	Obs.	R-sq	F-stat	Obs.	R-sq	F-stat	Obs.	R-sq
Total contributions	11.470 (0.000)	108,726	0.990	78.959 (0.000)	34,183	0.989	2.786 (0.000)	77,245	0.991
Government grants	1.578 (0.000)	108,726	0.988	10.758 (0.000)	34,18	0.958	1.379 (0.000)	77,245	0.989
Other revenue	1.301 (0.000)	108,726	0.886	2.908 (0.000)	34,18	0.879	1.305 (0.000)	77,245	0.898
Total revenue	5.508 (0.000)	108,726	0.997	69.6903 (0.000)	34,18	0.998	1.595 (0.000)	77,245	0.997
Total expenses	6.288 (0.000)	108,726	0.997	73.359 (0.000)	34,18	0.998	2.046 (0.000)	77,245	0.997
Program expenses	9.744 (0.000)	108,726	0.998	63.021 (0.000)	34,18	0.998	2.325 (0.000)	77,245	0.998
Administration expenses	1.334 (0.000)	108,726	0.959	1.512 (0.000)	34,18	0.981	1.852 (0.000)	77,245	0.961
Fundraising expenses	28.945 (0.000)	108,726	0.998	4.604 (0.000)	34,18	0.994	38.696 (0.000)	77,245	0.998
Volunteers	4.304 (0.000)	90,682	0.834	98.648 (0.000)	28,971	0.993	4.774 (0.000)	59,887	0.812
Number of employees	0.028 (1.000)	108,726	0.625	0.961 (0.842)	34,183	0.987	0.028 (1.000)	72,245	0.605
% volunteers	5.677 (0.000)	53,730	0.858	34.105 (0.000)	18,327	0.938	0.024 (1.000)	34,498	0.647

Notes: p-values in parentheses.

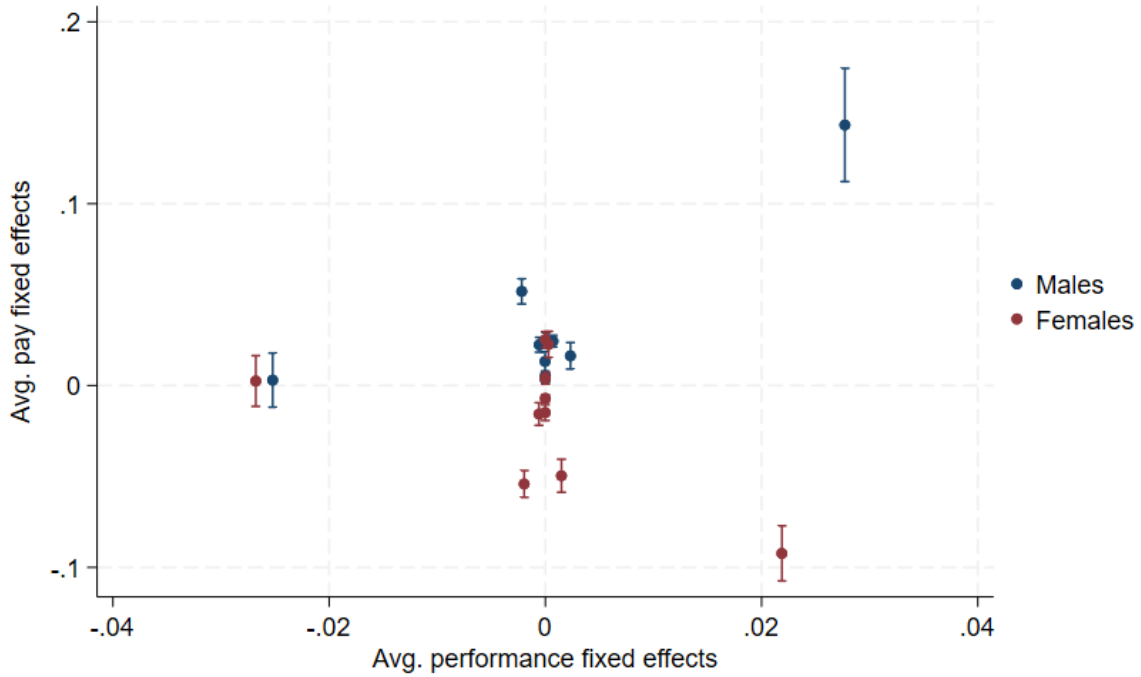


Figure 7: Averages by deciles

Appendices

A For Online Publication - Institutional background

Table A.1: National Taxonomy of Exempt Entities – Major groups

Code	Description
A	Arts, culture & humanities
B	Education
C	Environment
D	Animal-related
E	Health care
F	Mental health & crisis intervention
G	Voluntary health associations & medical disciplines
H	Medical research
I	Crime & legal-related
J	Employment
K	Food, agriculture & nutrition
L	Housing & shelter
M	Public safety, disaster preparedness & relief
N	Recreation & sports
O	Youth development
P	Human services
Q	International, foreign affairs & national security
R	Civil rights, social action & advocacy
S	Community improvement & capacity building
T	Philanthropy, voluntarism & grant foundation
U	Science & technology
V	Social science
W	Public & societal benefit
X	Religion-related
Y	Mutual & membership benefit
Z	Unknown

Source: Urban Institute, National Center for Charitable Statistics (2019).

Table A.2: National Taxonomy of Exempt Entities – Common codes

Code	Description
01	Alliance/advocacy organizations
02	Management and technical assistance
03	Professional societies/associations
05	Research institutes/public policy analysis
11	Monetary support-single organization
12	Fund raising & fund distribution
19	Monetary support not elsewhere classified (N.E.C.)
99	Not elsewhere classified (N.E.C.)

Source: Urban Institute, National Center for Charitable Statistics (2019).

Table A.3: National Taxonomy of Exempt Entities – Examples

Organizations	Major	Decile	Centile	Description
Museum of Modern Art	A	51	0	Art museums
Harvard University	B	50	0	Graduate & professional schools
Greenpeace Fund inc	C	12	3	Fund raising & fund distribution
Human society of central Illinois	D	20	0	Animal protextion & welfare
The Cleveland Clinic Foundation	E	21	0	Community Health Systems
American Foundation for suicide prevention	F	11	0	Single organization support
National braille association inc.	G	41	Z	Eye diseases, blindness & vision impairments
Brain research foundation	H	48	J	Brain disorders research
American law institute	I	03	0	Professional societies & associations
Center of employment opportunities inc	J	20	-	Employment prepartion & procurement
Meals on wheels association of America inc	K	30	C	Food programs
Habitat for Humanity of Suffolk	L	20	Z	Housing development, construction & management
FDNY Foundation inc	M	11	2	Fund raising & fund distribution
North American hockey academy inc	N	68	-	Winter sports
Boys & Girls clubs of Boston inc	O	23	0	Boys & girls clubs
YMCA state of Maine	P	27	Z	Young mens or womens associations
World vision	Q	33	0	International relief
NAACP Foundation	R	22	I	Minority rights
Alliance of downtown New York	S	99	Z	Community improvement & capacity building N.E.C.
United Way of Connecticut	T	70	Z	Federated giving programs
Pasteur foundation inc	U	50	J	Biological & Life sciences
National bureau of economic research inc	V	22	0	Economics
Rand corporation	W	05	0	Research institutes & public policy analysis
The actors' fund of America	Y	40	0	Fraternal societies

Source: Compiled by authors from data obtained from `charitynavigator.org` and `Guidestar.org`

B For Online Publication - Additional tables and figures

B.1 Full sample

Table B.1: Results – Compensation (Quintiles 4 and 5 of total revenue)

	Quintile 4						Quintile 5					
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)
I(female)	-0.152***	-0.035	-0.134***	-0.098***	-0.151***	-0.056*	-0.137***	-0.070***	-0.149***	-0.079***	-0.166***	-0.134***
	(0.030)	(0.032)	(0.029)	(0.018)	(0.032)	(0.032)	(0.031)	(0.016)	(0.028)	(0.025)	(0.040)	(0.040)
Manager tenure	0.053***	0.058***	0.052***	0.061***	0.055***	0.062***	0.056***	0.068***	0.059***	0.060***	0.053***	0.063***
	(0.005)	(0.006)	(0.004)	(0.003)	(0.006)	(0.005)	(0.004)	(0.003)	(0.005)	(0.005)	(0.006)	(0.003)
Total revenue (log)	0.306***	0.161***	0.291***	0.127***	0.329***	0.117***	0.243***	0.114***	0.285***	0.140***	0.323***	0.123***
	(0.051)	(0.057)	(0.027)	(0.043)	(0.028)	(0.041)	(0.028)	(0.023)	(0.028)	(0.027)	(0.018)	(0.024)
Constant	6.920***	7.557***	6.841***	9.716***	6.421***	9.491***	7.750***	10.342***	7.099***	8.722***	6.284***	10.174***
	(0.701)	(0.904)	(0.384)	(0.815)	(0.393)	(0.546)	(0.478)	(0.343)	(0.401)	(0.809)	(0.439)	(0.519)
Controls	X	X	X	X	X	X	X	X	X	X	X	X
Officer titles	X	X	X	X	X	X	X	X	X	X	X	X
NTEE	X		X		X		X		X		X	
Charity		X		X		X		X		X		X
N	35,799	35,799	49,006	49,006	40,303	40,303	54,000	54,000	45,594	45,594	61,408	61,408
adj. R-sq	0.109	0.830	0.136	0.805	0.120	0.830	0.137	0.792	0.124	0.824	0.357	0.822

Notes: Quintiles 4 and 5 of total revenue further separated into terciles. Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Column (1) includes NTEE fixed effects and Column (2) include organization fixed effects.

Table B.2: Results – Compensation and likelihood of compensation (interactions for officer title)

	(1) ln(comp.)	(2) ln(comp.)	(3) I(paid)	(4) I(paid)
I(female)	-0.415***	-0.318***	-0.085***	-0.042**
	(0.088)	(0.075)	(0.019)	(0.019)
I(CEO)	0.090*	0.177**	0.366***	0.431***
	(0.052)	(0.065)	(0.058)	(0.074)
I(Chief officer)	0.086	-0.038	0.348***	0.332***
	(0.080)	(0.057)	(0.066)	(0.074)
I(Director)	-0.143*	-0.014	0.076	0.123**
	(0.073)	(0.036)	(0.052)	(0.057)
I(President)	-0.105	0.024	-0.222***	-0.180***
	(0.072)	(0.063)	(0.047)	(0.053)
I(Vice president)	0.266**	-0.092	0.152**	0.023
	(0.119)	(0.079)	(0.065)	(0.055)
I(female) × I(CEO)	0.204**	0.247***	0.142***	0.116***
	(0.077)	(0.070)	(0.021)	(0.017)
I(female) × I(Chief officer)	0.227**	0.178**	0.101***	0.060*
	(0.071)	(0.067)	(0.027)	(0.032)
I(female) × I(Director)	0.202**	0.245**	0.214***	0.179***
	(0.074)	(0.093)	(0.034)	(0.027)
I(female) × I(President)	0.230**	0.261***	0.082***	0.049**
	(0.101)	(0.065)	(0.022)	(0.019)
I(female) × I(Vice president)	-0.081	0.137***	0.033	0.131***
	(0.130)	(0.045)	(0.047)	(0.024)
Manager tenure	0.062***	0.053***	0.029***	0.006***
	(0.004)	(0.002)	(0.002)	(0.000)
Total revenue (log)	0.258***	0.082***	0.057***	0.013***
	(0.019)	(0.014)	(0.006)	(0.002)
Constant	7.596***	9.677***	-0.381***	0.081
	(0.252)	(0.253)	(0.054)	(0.124)
Controls	X	X	X	X
NTEE	X		X	
Charity		X		X
N	452,261	452,261	988,210	988,210
adj. R-sq	0.345	0.874	0.515	0.854

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Column (1) include NTEE fixed effects and column (2) include organization fixed effects. Omitted title category is "Other".

Table B.3: Results – Compensation (Sources of expenses)

	Administration		Program		Fundraising	
	(1)	(2)	(1)	(2)	(1)	(2)
	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)
I(female)	-0.340***	-0.080	-0.198***	-0.080***	-0.346	0.070
	(0.067)	(0.111)	(0.028)	(0.020)	(0.204)	(0.142)
Manager tenure	0.085***	0.046***	0.060***	0.053***	0.086**	0.043
	(0.011)	(0.012)	(0.005)	(0.002)	(0.040)	(0.028)
Total revenue (log)	0.134***	0.010	0.271***	0.098***	0.212***	0.064**
	(0.022)	(0.014)	(0.021)	(0.014)	(0.044)	(0.023)
Constant	8.793***	10.719***	7.313***	9.317***	9.226***	10.412***
	(0.305)	(0.416)	(0.262)	(0.263)	(0.598)	(0.452)
Controls	X	X	X	X	X	X
Officer titles	X	X	X	X	X	X
NTEE	X		X		X	
Charity		X		X		X
N	12,638	12,638	433,002	433,002	1,360	1,360
adj. R-sq	0.264	0.898	0.359	0.875	0.383	0.903

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects. Organization grouped by primary source of expenses (administration, program or fundraising). Column (1) includes NTEE fixed effects and Column (2) include organization fixed effects.

Table B.4: Results – Compensation (Sources of revenue)

	Government grants		Membership dues		Program service revenue	
	(1)	(2)	(1)	(2)	(1)	(2)
	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)
I(female)	-0.200***	-0.065***	-0.151**	-0.076	-0.217***	-0.109***
	(0.035)	(0.023)	(0.062)	(0.050)	(0.030)	(0.027)
Manager tenure	0.057***	0.048***	0.070***	0.050***	0.060***	0.052***
	(0.006)	(0.003)	(0.016)	(0.015)	(0.005)	(0.002)
Total revenue (log)	0.250***	0.101***	0.391***	0.248***	0.292***	0.132***
	(0.017)	(0.011)	(0.035)	(0.081)	(0.032)	(0.032)
Constant	7.444***	8.998***	5.784***	7.621***	7.105***	8.849***
	(0.251)	(0.293)	(0.403)	(1.240)	(0.418)	(0.590)
Controls	X	X	X	X	X	X
Officer titles	X	X	X	X	X	X
NTEE	X		X		X	
Charity		X		X		X
N	221,252	221,252	3,831	3,831	184,091	184,091
adj. R-sq	0.282	0.856	0.420	0.928	0.397	0.893

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects. Organization grouped by primary source of revenue (Government grants, membership dues or program service revenue). Column (1) includes NTEE fixed effects and Column (2) include organization fixed effects.

Table B.5: Results – Compensation (levels)

	(1) Comp.	(2) Comp.	(3) Comp.	(4) Comp.
I(female)	-17,205.688*	-26,962.994***	-26,884.354**	-8,877.337*
	(8,690.208)	(9,541.128)	(9,838.976)	(4,316.638)
Manager tenure	9,824.944***	8,029.668***	7,880.240***	5,795.988***
	(825.497)	(729.393)	(565.486)	(1,350.846)
Total revenue (log)	37,133.488***	32,459.905***	29,655.415***	4,192.850***
	(9,174.454)	(8,582.302)	(6,711.186)	(869.356)
Constant	-451,471.745***	-387,926.708***	-354,226.754***	-25,340.356
	(112,659.353)	(106,010.433)	(88,148.923)	(26,000.737)
Controls	X	X	X	X
Officer titles		X	X	X
NTEE			X	
Charity				X
N	988,210	988,210	988,210	988,210
adj. R-sq	0.144	0.163	0.185	0.685

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects.

Table B.6: Results – Compensation (levels, no zero)

	(1) Comp.	(2) Comp.	(3) Comp.	(4) Comp.
I(female)	-55,599.543***	-52,583.202***	-52,506.620***	-29,198.032**
	(15,839.075)	(15,988.724)	(16,393.622)	(13,033.457)
Manager tenure	6,197.852***	5,658.469***	5,910.292***	9,240.432***
	(1,584.763)	(1,535.857)	(1,132.100)	(2,306.752)
Total revenue (log)	47,229.535***	47,569.666***	41,615.395***	7,250.022***
	(12,429.306)	(12,412.400)	(8,713.635)	(1,570.250)
Constant	-530,141.497***	-554,788.150***	-474,708.784***	-33,636.133
	(158,725.936)	(165,684.961)	(123,660.784)	(56,616.277)
Controls	X	X	X	X
Officer titles		X	X	X
NTEE			X	
Charity				X
N	452,261	452,261	452,261	452,261
adj. R-sq	0.130	0.132	0.167	0.734

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects. Estimation on subsample of compensated managers.

Table B.7: Results – Compensation and likelihood of compensation (interaction between gender and time)

	(1)	(2)	(3)	(4)
	ln(comp.)	ln(comp.)	I(paid)	I(paid)
I(female)	-0.260***	-0.092***	0.012***	0.025***
	(0.038)	(0.022)	(0.005)	(0.006)
I(tax year = 2012)	-0.051***	-0.015**	-0.022***	-0.004***
	(0.009)	(0.007)	(0.003)	(0.001)
I(tax year = 2013)	-0.095***	-0.030***	-0.045***	-0.011***
	(0.015)	(0.007)	(0.004)	(0.002)
I(tax year = 2014)	-0.124***	-0.049***	-0.060***	-0.015***
	(0.013)	(0.007)	(0.006)	(0.003)
I(tax year = 2015)	-0.135***	-0.045***	-0.074***	-0.019***
	(0.016)	(0.007)	(0.006)	(0.003)
I(tax year = 2016)	-0.140***	-0.043***	-0.084***	-0.021***
	(0.015)	(0.010)	(0.007)	(0.003)
I(tax year = 2017)	-0.144***	-0.041***	-0.095***	-0.025***
	(0.017)	(0.011)	(0.008)	(0.003)
I(tax year = 2018)	-0.160***	-0.038***	-0.108***	-0.028***
	(0.025)	(0.011)	(0.009)	(0.004)
I(female) × I(tax year=2012)	0.010	-0.004	0.005***	0.004**
	(0.010)	(0.010)	(0.002)	(0.002)
I(female) × I(tax year=2013)	0.031**	-0.000	0.008***	0.006 **
	(0.013)	(0.007)	(0.002)	(0.002)
I(female) × I(tax year=2014)	0.042***	0.010	0.008**	0.004
	(0.013)	(0.010)	(0.003)	(0.003)
I(female) × I(tax year=2015)	0.048***	0.008	0.009***	0.004
	(0.014)	(0.010)	(0.004)	(0.003)
I(female) × I(tax year=2016)	0.058***	0.011	0.007*	0.002
	(0.017)	(0.011)	(0.003)	(0.003)
I(female) × I(tax year=2017)	0.063***	0.016	0.009**	0.004
	(0.016)	(0.015)	(0.004)	(0.004)
I(female) × I(tax year=2018)	0.068***	0.016	0.009	0.004
	(0.020)	(0.014)	(0.006)	(0.004)
Manager tenure	0.062***	0.053***	0.029***	0.013***
	(0.004)	(0.002)	(0.002)	(0.000)
Total revenue (log)	0.258***	0.082***	0.057***	0.013***
	(0.019)	(0.014)	(0.005)	(0.002)
Constant	7.525***	9.542***	-0.430***	0.035
	(0.253)	(0.247)	(0.055)	(0.126)
Controls	X	X	X	X
Officer titles	X	X	X	X
NTEE	X		X	
Charity		X		X
N	452,261	452,261	988,210	988,210
adj. R-sq	0.345	0.874	0.514	0.854

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects.

Table B.8: Results – Likelihood of compensation (Sources of expenses)

	Administration		Program		Fundraising	
	(1)	(2)	(1)	(2)	(1)	(2)
	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)
I(female)	0.016*	0.026***	0.020***	0.028***	0.046***	0.048
	(0.009)	(0.009)	(0.004)	(0.004)	(0.015)	(0.021)
Manager tenure	0.024***	0.000	0.029***	0.006***	0.015***	0.012
	(0.002)	(0.003)	(0.002)	(0.000)	(0.004)	(0.009)
Total revenue (log)	0.036***	0.005***	0.060***	0.013***	0.063***	0.003
	(0.003)	(0.002)	(0.006)	(0.002)	(0.005)	(0.014)
Constant	-0.117**	1.844***	-0.464***	0.035	-0.855***	0.036
	(0.053)	(0.278)	(0.094)	(0.116)	(0.082)	(0.189)
Controls	X	X	X	X	X	X
Officer title	X	X	X	X	X	X
NTEE	X		X		X	
Charity		X		X		X
N	40,208	40,208	929,347	929,347	4,518	4,518
adj. R-sq	0.360	0.843	0.520	0.857	0.497	0.891

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects. Organization grouped by primary source of expenses (administration, program or fundraising). Column (1) includes NTEE fixed effects and Column (2) include organization fixed effects.

Table B.9: Results – Likelihood of compensation (Sources of revenue)

	Government grants		Membership dues		Program service revenue	
	(1)	(2)	(1)	(2)	(1)	(2)
	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)
I(female)	0.023***	0.031***	0.002	-0.000	0.013***	0.020***
	(0.004)	(0.004)	(0.011)	(0.011)	(0.004)	(0.005)
Manager tenure	0.025***	0.005***	0.029***	0.003	0.030***	0.006***
	(0.002)	(0.001)	(0.004)	(0.002)	(0.004)	(0.000)
Total revenue (log)	0.054***	0.013***	0.061***	0.005	0.059***	0.023***
	(0.003)	(0.001)	(0.004)	(0.011)	(0.009)	(0.005)
Constant	-0.471***	-0.102	-0.698***	0.528***	-0.365***	0.105
	(0.035)	(0.149)	(0.064)	(0.130)	(0.094)	(0.096)
Controls	X	X	X	X	X	X
Officer title	X	X	X	X	X	X
NTEE	X		X		X	
Charity		X		X		X
N	543,330	543,330	17,308	17,308	379,259	379,259
adj. R-sq	0.539	0.857	0.500	0.859	0.484	0.891

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects. Organization grouped by primary source of revenue (government grants, membership dues, program service revenue). Column (1) includes NTEE fixed effects and Column (2) include organization fixed effects.

B.2 LinkedIn Sample

Table B.10: Results – Compensation (LinkedIn Sample - Additional Regressions)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)
I(female)	-0.155***	-0.156***	-0.156***	-0.155***	-0.049*	-0.048	-0.051*	-0.048*
	(0.022)	(0.022)	(0.022)	(0.022)	(0.027)	(0.027)	(0.027)	(0.026)
Manager tenure	0.060***	0.059***	0.060***	0.060***	0.055***	0.055***	0.054***	0.053***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
Total revenue (log)	0.268***	0.269***	0.269***	0.268***	0.054***	0.054***	0.054***	0.053***
	(0.018)	(0.018)	(0.018)	(0.018)	(0.011)	(0.011)	(0.011)	(0.005)
I(college degree)	-0.003			-0.026	-0.019			-0.031
	(0.013)			(0.018)	(0.017)			(0.020)
I(graduate degree)	0.054***			0.028	0.006			-0.002
	(0.016)			(0.018)	(0.023)			(0.023)
Age		0.001***		0.001***		0.000		0.001**
		(0.000)		(0.000)		(0.000)		(0.000)
Experience			0.294**	0.136			-0.200*	-0.411***
			(0.107)	(0.122)			(0.106)	(0.139)
Constant	7.343***	7.327***	7.341***	7.314***	9.882***	10.030***	9.884***	9.875***
	(0.217)	(0.215)	(0.215)	(0.217)	(0.412)	(0.285)	(0.418)	(0.409)
Controls	X	X	X	X	X	X	X	X
Officer title	X	X	X	X	X	X	X	X
NTEE	X	X	X	X				
Charity					X	X	X	X
N	115,675	115,675	115,675	115,675	115,675	115,675	115,675	115,675
adj. R-sq	0.352	0.352	0.352	0.352	0.886	0.886	0.886	0.886

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects. Organization grouped by primary source of expenses (administration, program or fundraising). Columns (1) to (4) include NTEE fixed effects and Columns (2) to (5) include organization fixed effects.

Table B.11: Results – Compensation (Quintiles of total revenue) - LinkedIn subsample

	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)	ln(comp.)
I(female)	-0.330***	0.100	-0.127***	0.021	-0.132***	0.035	-0.122***	0.039	-0.134***	-0.107**
	(0.065)	(0.153)	(0.036)	(0.070)	(0.027)	(0.072)	(0.019)	(0.068)	(0.026)	(0.033)
Manager tenure	0.034**	0.030	0.083***	0.032	0.057***	0.045***	0.052***	0.066***	0.054***	0.070***
	(0.015)	(0.019)	(0.010)	(0.022)	(0.005)	(0.009)	(0.007)	(0.008)	(0.004)	(0.004)
Total revenue (log)	-0.103***	0.058**	0.261***	0.255***	0.370***	0.171***	0.297***	0.103***	0.288***	0.070***
	(0.025)	(0.027)	(0.053)	(0.037)	(0.037)	(0.026)	(0.020)	(0.018)	(0.012)	(0.004)
Constant	11.889***	9.515***	7.273***	7.789***	5.719***	8.116***	6.923***	9.648***	7.078***	10.688***
	(0.410)	(0.334)	(0.643)	(0.406)	(0.460)	(0.408)	(0.262)	(0.278)	(0.163)	(0.202)
Controls	X	X	X	X	X	X	X	X	X	X
Officer titles	X	X	X	X	X	X	X	X	X	X
NTEE	X		X		X		X		X	
Charity		X		X		X		X		X
LinkedIn Controls	X	X	X	X	X	X	X	X	X	X
N	6,272	6,272	15,289	15,289	22,778	22,778	32,978	32,978	38,358	38,358
adj. R-sq	0.191	0.872	0.121	0.870	0.124	0.869	0.124	0.844	0.350	0.871

Notes: Quintiles of total revenue. Quintile 1 lowest total revenue. Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects. Column (1) includes NTEE fixed effects and Column (2) include organization fixed effects. Estimation on the subsample of managers matched to their LinkedIn profile.

Table B.12: Results – Likelihood of compensation (LinkedIn Sample - Additional Regressions)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)
I(female)	0.028***	0.028***	0.028***	0.028***	0.047***	0.047***	0.047***	0.047***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.007)	(0.007)	(0.007)	(0.007)
Manager tenure	0.030***	0.029***	0.030***	0.030***	0.005***	0.005***	0.005***	0.005***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Total revenue (log)	0.056***	0.056***	0.056***	0.056***	0.014***	0.014***	0.014***	0.014***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.002)	(0.002)	(0.002)	(0.002)
I(college degree)	0.011***			0.017***	0.003			0.022**
	(0.004)			(0.004)	(0.008)			(0.005)
I(graduate degree)	0.013**			0.019***	-0.001			0.011
	(0.005)			(0.006)	(0.002)			(0.007)
Age		-0.000		-0.000***		0.000		-0.000*
		(0.000)		(0.000)		(0.000)		(0.000)
Experience			0.082***	0.112***			0.081*	0.085*
			(0.028)	(0.027)			(0.035)	(0.045)
Constant	-0.408***	-0.402***	-0.404***	-0.405***	0.124*	0.134*	0.134*	0.127*
	(0.054)	(0.054)	(0.054)	(0.054)	(0.070)	(0.070)	(0.070)	(0.070)
Controls	X	X	X	X	X	X	X	X
Officer title	X	X	X	X	X	X	X	X
NTEE	X	X	X	X				
Charity					X	X	X	X
N	237,045	237,045	237,045	237,045	237,045	237,045	237,045	237,045
adj. R-sq	0.545	0.545	0.545	0.545	0.879	0.791	0.879	0.879

Notes: Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects. Organization grouped by primary source of expenses (administration, program or fundraising). Columns (1) to (4) include NTEE fixed effects and Columns (2) to (5) include organization fixed effects.

Table B.13: Results – Likelihood of compensation (Quintiles of total revenue) - LinkedIn subsample

	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)	I(paid)
I(female)	0.025***	0.017	0.031***	0.042**	0.024***	0.046***	0.030***	0.054***	0.020***	0.028*
	(0.008)	(0.011)	(0.006)	(0.017)	(0.005)	(0.009)	(0.006)	(0.011)	(0.004)	(0.014)
Manager tenure	0.014***	0.003	0.025***	0.002	0.032***	0.003*	0.037***	0.006**	0.033***	0.007**
	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.004)	(0.003)
Total revenue (log)	0.016***	0.008**	0.081***	0.006	0.048***	-0.003	0.060***	0.026***	0.051***	0.024***
	(0.005)	(0.003)	(0.010)	(0.010)	(0.010)	(0.011)	(0.010)	(0.008)	(0.017)	(0.004)
Constant	-0.057	-0.060	-0.803***	0.150	-0.317***	1.176***	-0.393**	0.045	-0.170	0.456*
	(0.061)	(0.130)	(0.138)	(0.118)	(0.118)	(0.181)	(0.142)	(0.143)	(0.214)	(0.238)
Controls	X	X	X	X	X	X	X	X	X	X
Officer titles	X	X	X	X	X	X	X	X	X	X
NTEE	X		X		X		X		X	
Charity		X		X		X		X		X
LinkedIn controls	X	X	X	X	X	X	X	X	X	X
N	37,824	37,824	46,013	46,013	50,965	50,965	54,629	54,629	47,614	47,614
adj. R-sq	0.331	0.849	0.471	0.860	0.515	0.879	0.517	0.880	0.375	0.860

Notes: Quintiles of total revenue. Quintile 1 lowest total revenue. Standard errors in parentheses. Standard errors clustered at NTEE level. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$. Controls are additional charity variables that include the share of revenue from program service revenue and membership dues, total net assets (as a share of total revenue), and the indicators for the number of programs (2, 3, and, 4 and above). Controls also include tax year and state fixed effects. Column (1) includes NTEE fixed effects and Column (2) include organization fixed effects. Estimation on the subsample of managers matched to their LinkedIn profile.

B.3 Additional Tables and Figures - Mechanisms

Table B.14: Descriptive Statistics – Organization variables (connected sample)

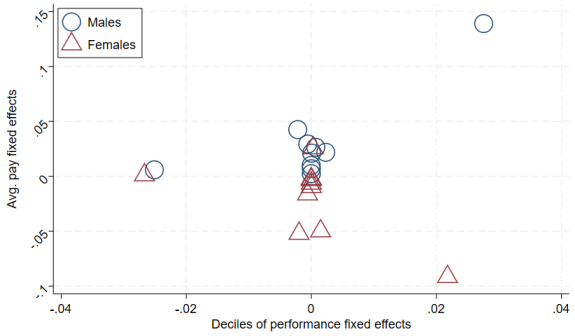
	Obs.	Mean	S.d.	Median	p99
Total revenue	335,690	123.492	1,829.946	6.792	2,156.378
Government grants	335,690	17.097	231.416	1.749	234.415
Total contributions	335,690	24.434	290.832	2.082	332.531
Membership dues	335,690	0.245	5.046	0.000	3.622
Program service revenue	335,690	92.587	1,755.753	1.215	1,730.281
Total expenses	335,690	116.950	1,774.026	6.410	2,035.264
Program expenses	335,690	101.082	1,657.513	5.226	1,768.022
Administration expenses	335,690	14.515	159.833	0.717	247.626
Fundraising expenses	335,690	1.343	20.567	0.000	19.097
Total net assets	335,690	112.364	1,091.371	7.001	2,087.911
Total liabilities	335,690	86.216	1,254.677	1.282	1,477.807
Total assets	335,690	198.581	2,088.097	12.368	3,479.807
No. of employees	335,690	121.966	1,709.134	5.000	2,027.000
Volunteers	268,768	782.313	38,479.368	25.000	5,000.000

Notes: All variables in $100,000. Total contributions is the sum of donations (direct and indirect support) and government grants.

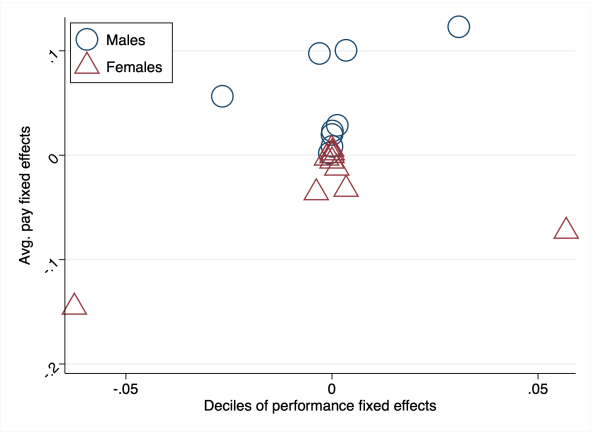
Table B.15: Descriptive Statistics – Manager variables (connected sample)

	Connected sample		**Full sample**	
	Mean	S.d.	Mean	S.d.
		Quintile 1		
Female (%)	0.347	0.476	0.379	0.485
Paid (%)	0.223	0.416	0.167	0.373
Compensation ($)	46,351.912	177,578.561	22,279.364	118,958.330
Obs.	55,374		182,646	
		Quintile 2		
Female (%)	0.377	0.485	0.421	0.494
Paid (%)	0.282	0.450	0.293	0.455
Compensation ($)	35,377.743	122,927.875	22,974.794	83,680.364
Obs.	57,193		190,678	
		Quintile 3		
Female (%)	0.381	0.486	0.433	0.496
Paid (%)	0.379	0.485	0.406	0.491
Compensation ($)	50,312.245	148,009.450	38,367.677	107,818.704
Obs.	65,072		203,111	
		Quintile 4		
Female (%)	0.391	0.488	0.437	0.496
Paid (%)	0.533	0.499	0.567	0.496
Compensation ($)	76,910.653	165,420.321	67,196.955	128,260.252
Obs.	73,681		215,015	
		Quintile 5		
Female (%)	0.335	0.472	0.374	0.484
Paid (%)	0.784	0.412	0.794	0.405
Compensation ($)	229,246.134	406,930.483	197,179.826	369,299.635
Obs.	84,370		207,543	
		Quintile 5		
Female (%)	0.365	0.481	0.409	0.492
Paid (%)	0.472	0.499	0.456	0.498
Compensation ($)	97,924.629	256,170.245	71,686.756	206,307.153
Obs.	335,690		998,993	

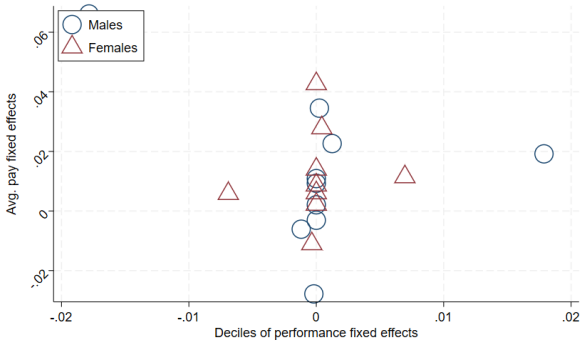
Notes: Share of female managers, share of paid managers and compensation by quintiles of total revenue for the connected sample used to estimate the managers fixed effects and the full sample.



(a) All managers

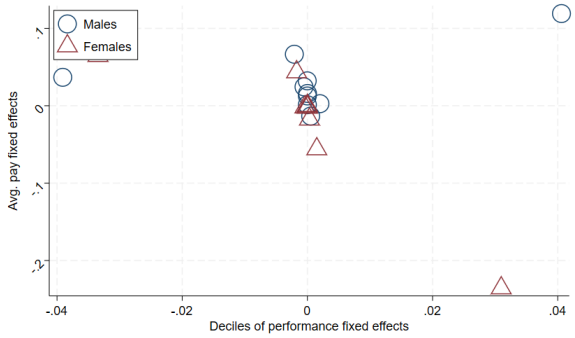


(b) Managers at organizations with males and females

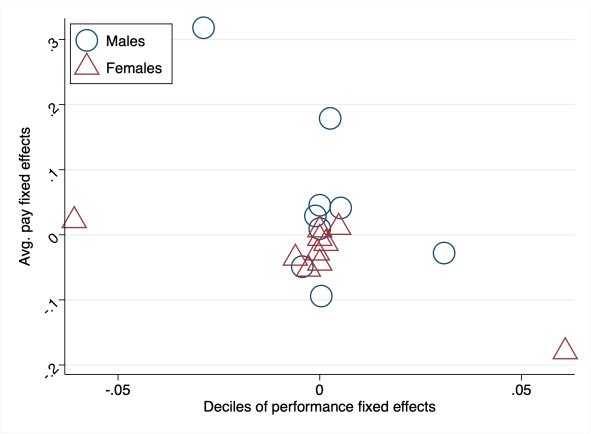


(c) Managers at organizations with one gender (women only or men only)

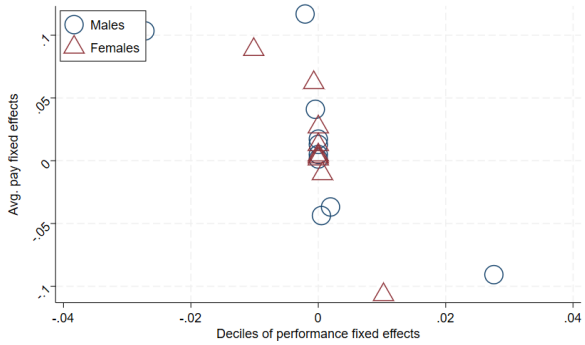
Figure B.1: Average pay fixed effects against average performance fixed effects by deciles - Total revenue



(a) All managers

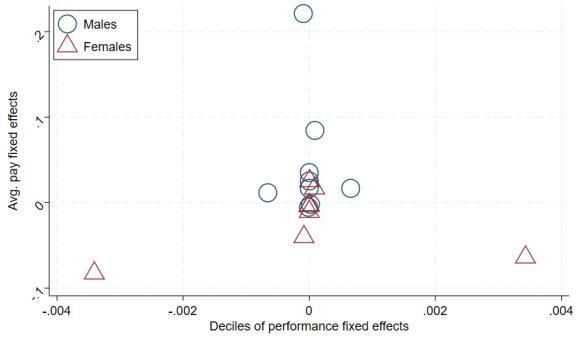


(b) Managers at organizations with males and females

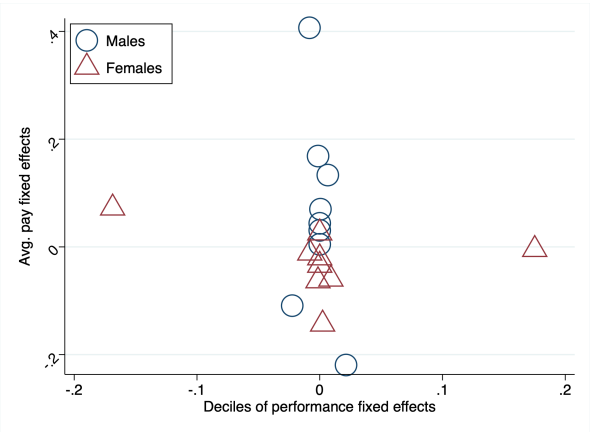


(c) Managers at organizations with one gender (women only or men only)

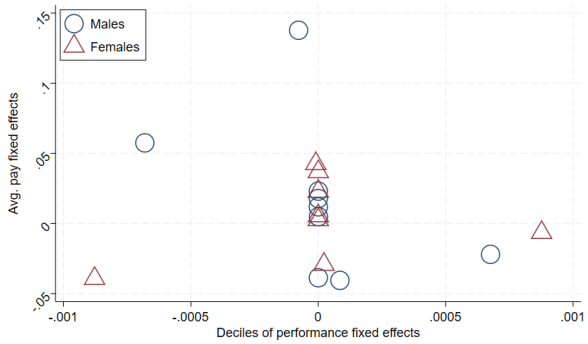
Figure B.2: Average pay fixed effects against average performance fixed effects by deciles - Total expenses



(a) All managers

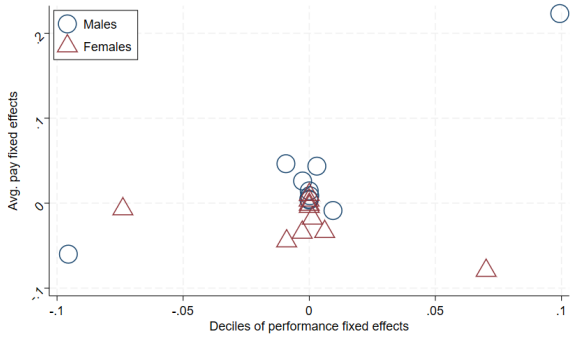


(b) Managers at organizations with males and females

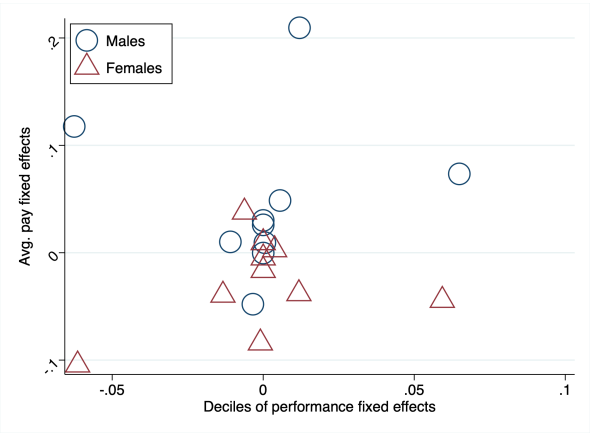


(c) Managers at organizations with one gender (women only or men only)

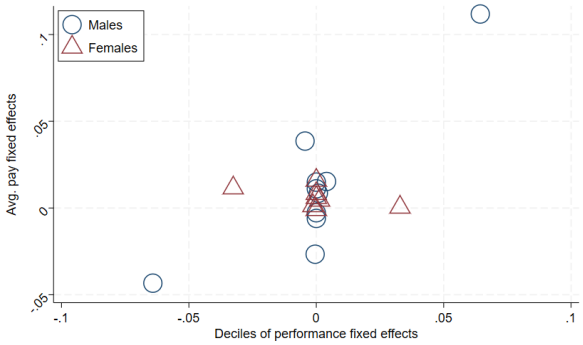
Figure B.3: Average pay fixed effects against average performance fixed effects by deciles - Share of volunteers



(a) All managers

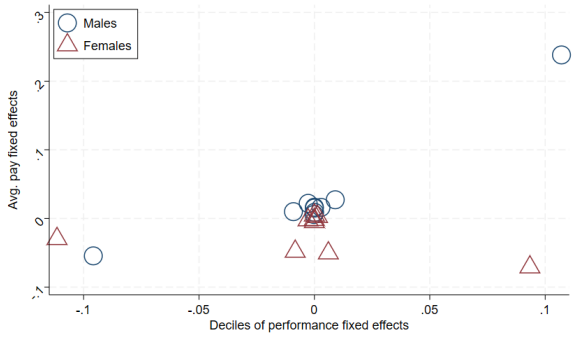


(b) Managers at organizations with males and females

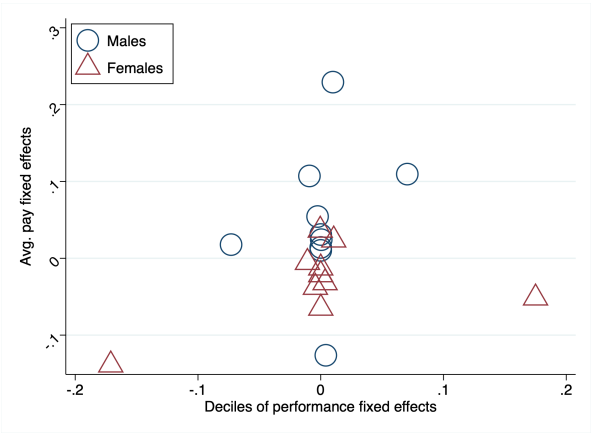


(c) Managers at organizations with one gender (women only or men only)

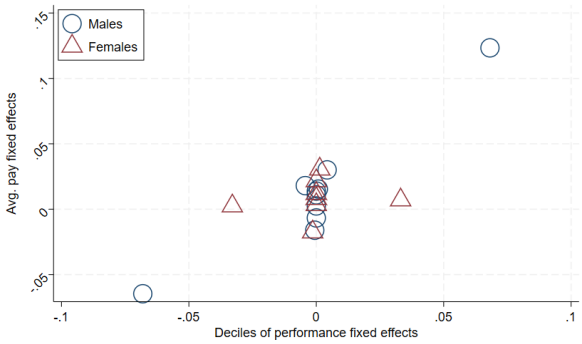
Figure B.4: Average pay fixed effects against average performance fixed effects by deciles - Government Grants



(a) All managers

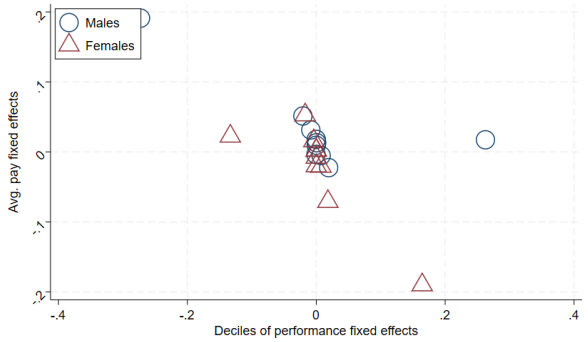


(b) Managers at organizations with males and females

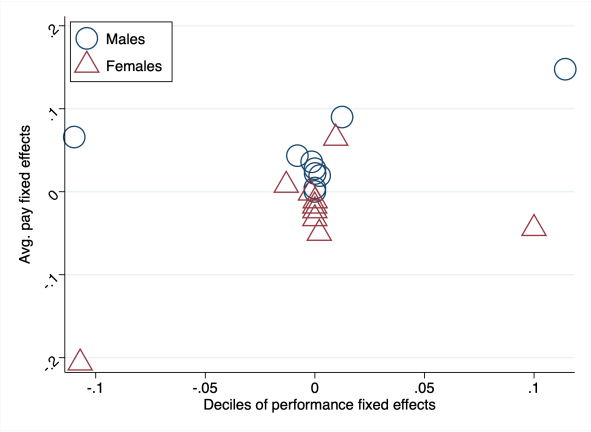


(c) Managers at organizations with one gender (women only or men only)

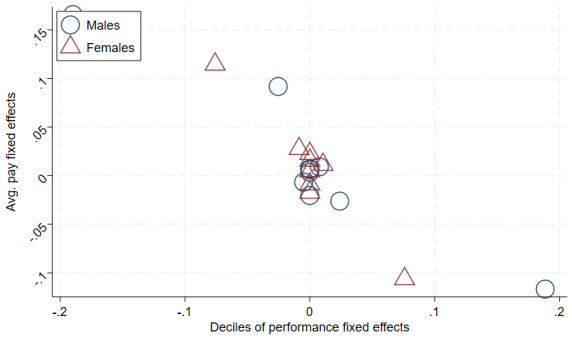
Figure B.5: Average pay fixed effects against average performance fixed effects by deciles - Total contributions



(a) All managers

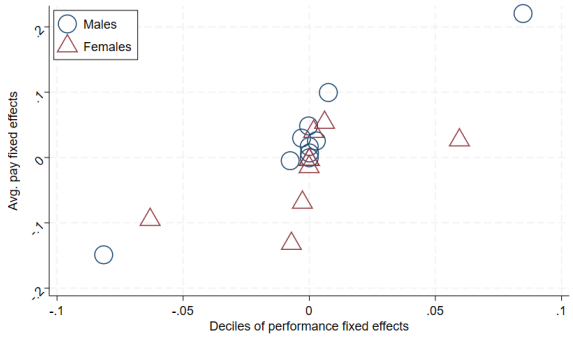


(b) Managers at organizations with males and females

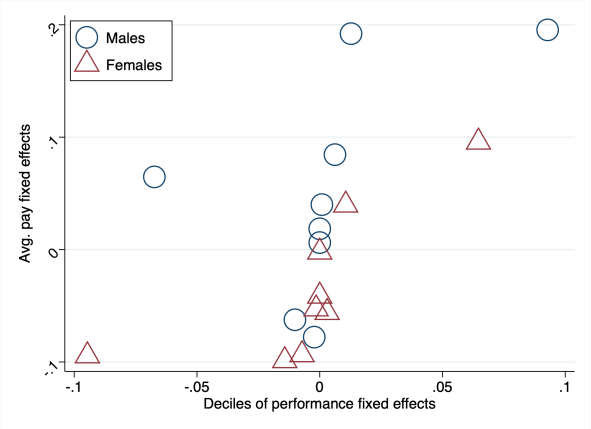


(c) Managers at organizations with one gender (women only or men only)

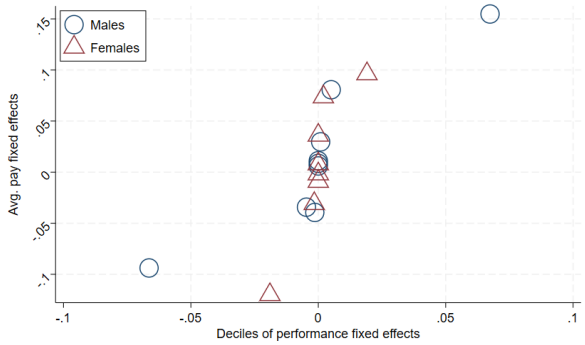
Figure B.6: Average pay fixed effects against average performance fixed effects by deciles - Administration expenses



(a) All managers

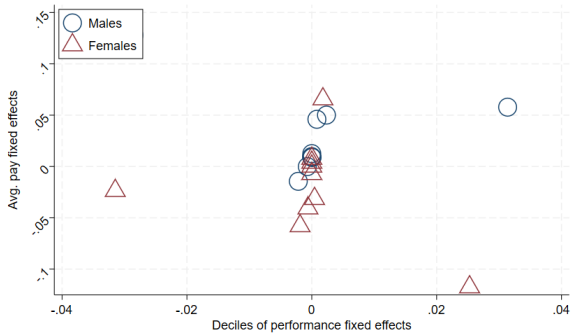


(b) Managers at organizations with males and females

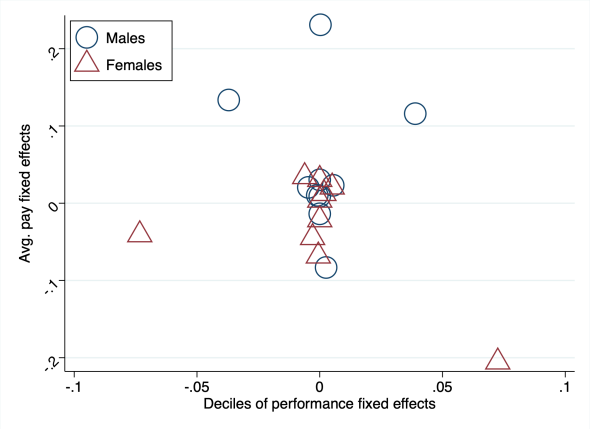


(c) Managers at organizations with one gender (women only or men only)

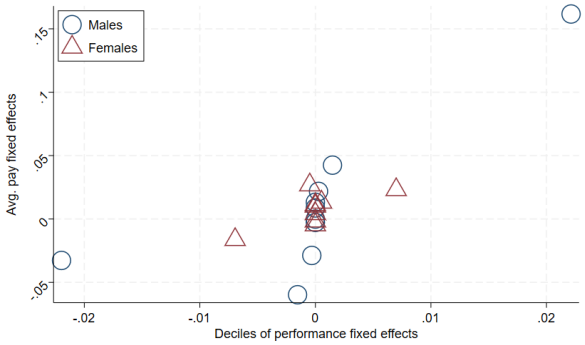
Figure B.7: Average pay fixed effects against average performance fixed effects by deciles - Fundraising expenses



(a) All managers

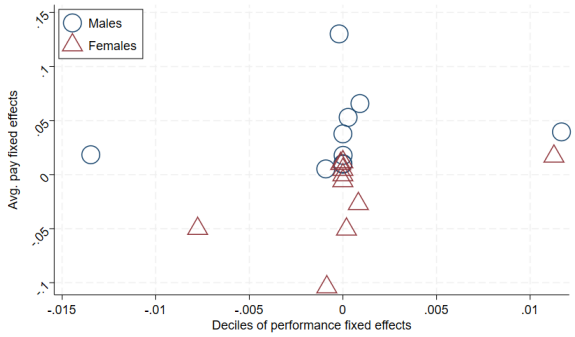


(b) Managers at organizations with males and females

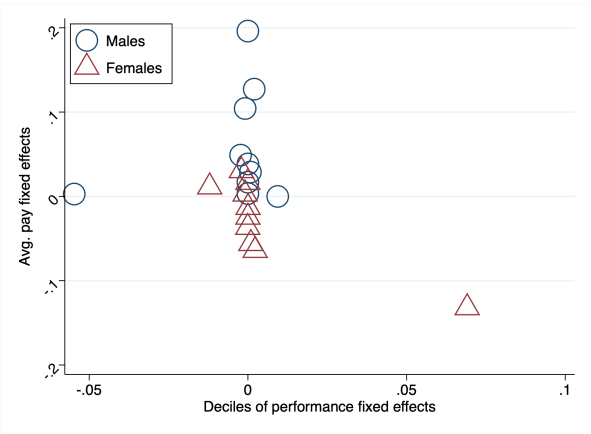


(c) Managers at organizations with one gender (women only or men only)

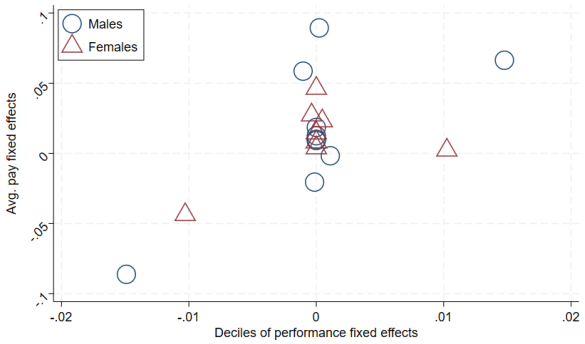
Figure B.8: Average pay fixed effects against average performance fixed effects by deciles - Program expenses



(a) All managers

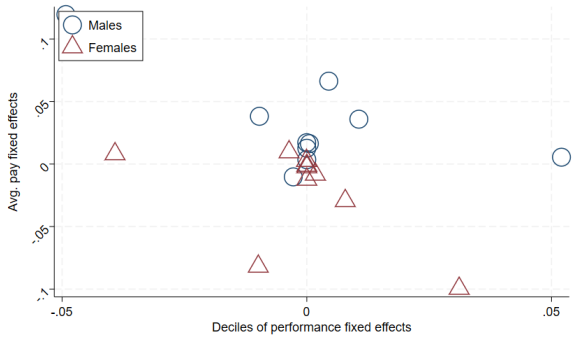


(b) Managers at organizations with males and females

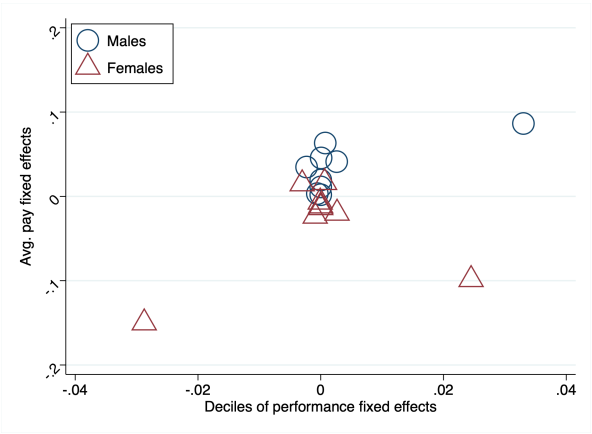


(c) Managers at organizations with one gender (women only or men only)

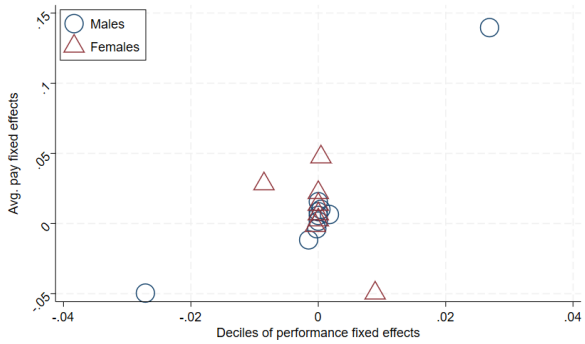
Figure B.9: Average pay fixed effects against average performance fixed effects by deciles - Volunteers



(a) All managers



(b) Managers at organizations with males and females



(c) Managers at organizations with one gender (women only or men only)

Figure B.10: Average pay fixed effects against average performance fixed effects by deciles - Number of Employees